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ABSTRACT

This report comprises edited versions of the presentations from the 17 participants in a conference under the sponsoreship of the Northwest Regional Educational Laboratory. The conference was designed to enable policy-makers, educators, and business people to share perspectives on the most effective methods for identifying and collecting data that can be used in both regional and local efforts to improve the planning, implementation, and evaluation of educational reforms. The participants and their topics were: Dean Mosier on "A Business Council's Needs for Education Data"; Martha Darling on "Business Perspectives on Using Data for Improvement and Accountability"; Don Egge on "State Perspectives on Using Data for Improvement and Accountability"; Michael Kirst on "Policy and Research Issues in Using Data to Promote School Reforms"; Francis Hatanaka on "Developing State, District, and School Objectives from School Profiles"; Harvey Crommet, Ichiro Fukumoto, Wayne Neuburger, and Stephen J. Slater in four separate presentations on "State Activities in Developing School Profiles, Data Bases, and Indicators"; Dennis Deck on "The High School and Beyond Database: Local, State, and National Perspectives"; Donald Holznagel on "The Feasibility of Regional Databases"; William Cooley on "Using Data Systems to Support a District's Evaluation and Improvement Efforts"; Bob Blum on "Profile Development and Goal Setting for School Improvement Leadership Teams"; Michael Brott and Milton Snyder in separate presentations on "District Use of Data to Support School Improvement"; Bob Hammond on "District Use of Data to Support Basic Skills Program Improvement"; and Matthew Prophet on "The Role of Evaluation and Assessment Data in Managing a Large District." Charts and diagrams used during the presentations are reproduced. (PGD)

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USING DATA AND INFORMATION SYSTEMS TO SUPPORT SCHOOL IMPROVEMENT AND ACCOUNTABILITY

Conference Proceedings

October 31 - November 1, 1985
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INTRODUCTION

Conference Overview

Recent recommendations to improve education have come from a wide set of perspectives including legislatures, state departments of education, boards of education, local education agencies and business. Often these efforts are implemented independently of one another and rely on widely different sources of supporting data. In some cases, educational agencies have minimal data available to judge the results of their efforts. In others, agencies are uncertain about what data are appropriate or how they should be used to judge educational improvements.

This conference, which was supported by NWREL with funding from the National Institute of Education, was built on the premise that an open discussion of approaches to using data will enable diverse groups to work more efficiently and cooperatively. This in turn will support the implementation and assessment of school improvement and reform efforts.

Conference Objectives Were:

- Share the perspectives of policy makers, educators and business on what data should be used in planning, implementing and evaluating educational reforms
- Describe how different agencies can work cooperatively to efficiently share information in order to improve our educational systems
- Illustrate through specific examples how data systems can serve those concerned with school improvement.

Presentation Abstracts

Dean Mosier, representing the Oregon Business Council, spoke of Oregon's need for broad based discussion and decision making regarding Oregon's future, particularly its economic future. He described the role of the Oregon Business Council, an organization made up of key business leaders in the State, in helping to shape visions and plans for Oregon and the Northwest region. Mosier spoke of the Council's need for support from the education community and invited educators to work with the Council to address current needs and problems.

Martha Darling, of the Washington Business Roundtable, spoke of the findings from the Roundtable's education study within the State of Washington. She described the mail, telephone and in-person surveying the Roundtable conducted to gather information about attitudes toward Washington's education system. Darling also described the Roundtable's investigation of testing procedures and recommendations the Roundtable based on findings in this and other areas.

Donald E. Egge, of the Oregon Department of Education, emphasized the importance of having accurate data and information for educational decision making. Egge presented and discussed a list of indicators used by selected states for measuring educational effectiveness. Egge gave particular emphasis to the importance of selecting indicators which accurately portray the school, district, state or other educational system being described. Examples of needed improvements in collecting and sharing data were presented.

Michael Kirst, of Stanford University, called attention to the ways that changes in educational priorities influence states and districts to collect and display different kinds of data. He emphasized that expanded data collection/analysis responsibilities require additional staff and support. Kirst discussed seven approaches to collecting information and using it to measure school effectiveness, trends, comparative benefits, and so on. A handout displaying data collected and shared by the State of California was distributed and discussed.

Francis Hatanaka, from the Hawaii Department of Education, described the role of data and school profiles in supporting accountabilty. Hawaii has established state level goals on several indicators, provides information to districts and schools and is striving to be more accountable for education within Hawaii.

Harvey Cromett, Alaska Department of Education, described establishing a data base at the state level. Alaska is also developing a system for establishing and reporting school profiles using Apple computers to facilitate communication between districts and the State Department.

Ichiro Fukumoto, of the Hawaii Department of Education, discussed the ways that Hawaii's educational data system is used. Fukumoto shared and discussed a series of school profile charts and talked about both the anticipated and unforeseen uses to which this information is put. Major uses of the data include accreditation studies, school-level goal setting and planning, and helping parents decide where to enroll their children.

Wayne Neuburger, Oregon Department of Education, addressed the issue of establishing goals for 1990 and detailed the preparations for school level profiles which will enable the schools to see the relationship between their data and statewide data. He reviewed the work of task forces that made recommendations for the Oregon Action Plan, and emphasized the need for the state to support change at the school and classroom level.

Stephen Slater, Oregon Department of Education, talked on Oregon's vision of school improvement and the state's role in supporting school improvement. He pointed out efforts to develop troubleshooting techniques at the local level through assistance in profile development and data analysis.

Dennis Deck, Northwest Regional Educational Laboratory, spoke about the High School and Beyond Study and its use at the local level. He showed how local data compare with national data with the High School and Beyond Study, how this information is used to supplement achievement data, and pointed out problem areas such as a need for comparative data over several years.

Don Holznagel, Northwest Regional Educational Laboratory, spoke on issues related to establishing and maintaining regional data bases. His presentation covered the purpose, organization, validity, reliability and accessibility characteristics of data bases.

William Cooley, from the University of Pittsburgh, discussed the events and issues connected with establishing a data management system in the Pittsburgh schools. His presentation focused on ways to ensure that data are useful and used, how teachers and planners can use the kinds of data in the system, and the resistance of some groups to the collection and sharing of these data.

Robert Blum, Northwest Regional Educational Laboratory, explained profile development and goal setting for school improvement. The responsibilities of the Leadership Team are defined and examples are given of how this process for school improvement works with emphasis on the individual school.

Michael Brott, Valley Education Consortium, presented a description of how a goal directed/outcome based curriculum and assessment system has been developed and implemented, with emphasis on a three-level monitoring system. He described the roles of both building administrators and teachers in organizing and using data to identify those students to be placed on a watch list to receive help through special programs (i.e., Chapter 1, special education, handicapped, or tutorial) to supplement that student's regular classroom work.

Robert Hammond, who works with the Springfield School District, described the system for collecting, displaying and using data in that district. In particular, Hammond described the development of this system and then reviewed with participants a data summary chart used to arrive at decisions about the need for program improvement efforts.

Milton Snyder, Federal Way School District in Washington State, presented on how his district developed an individual school learning plan to help revitalize the district's schools. He detailed the funding problems, test score changes, and efforts to obtain highly skilled personnel to implement the goals that have been established.

Matthew Prophet, Portland Public Schools, spoke about the needs for evaluation and assessment data in a large district and the uses of this data in reorganizing the Portland School system. He also described the history and current status of an instructional technology plan.

The remainder of the conference proceedings is an edited set of the presentations made by the conference participants.

A Business Council's Needs for Education Data

Dean Mosier
Oregon Business Council

I am complimented to be your morning speaker, and before we get into my talk I would like to wish you and your children a safe but scary Halloween.

I would like to talk this morning about the Oregon Business Council. The Oregon Business Council is a nonprofit, nonpartisian, independent organization of Oregon business executives. We were founded originally with 20 directors, primarily out of the Portland metropolitan area. Our fiscal year began in April. We now have 32 directors and are expanding our regional representation. The directors are all chief executive officers of major private and publicly held corporations. When they are not at the meetings, these representatives cannot forward a proxy vote; we are structured this way to encourage maximum participation and members have agreed to have this stipulation in the by-laws.

The Oregon Business Council is patterned after an emerging concept of state roundtables, or business councils, or business partnerships--whatever you want to call them. There are now about 15 such organizations nationally. The first one was in Minnesota in 1975; California developed its roundtable the next year; Pennsylvania in 1979; New Hampshire, the State of Washington, and approximately a dozen others since then.

The mission of the Oregon Business Council is similar to other such councils: To focus the talents, time and resources of its directors on issues of broad importance to Oregon's long-term social and economic well-being. To present to Oregonians constructive ideas. To resolve each issue addressed, basing all recommendations on thorough research and personal involvement by each director. To encourage public debate and foster policy consensus among business and government, education and diverse interest groups throughout the state.

The more established organizations have worked on projects such as health care cost containment, educational enhancement, public finance, pension plan management, economic development, worker's compensation, tourism and so on. The list is extensive.

Why the Oregon Business Council? Why now? Why is this trend occuring? As we all are aware, there is significant change going on in the federal government. There is more responsibility being turned back to the states, often without revenue.

In the State of Washington, a roundtable was established about two and a half years ago, and it was probably another two years in forming. The same thing has happened here in Oregon. One of the things that is curiously different about Washington and Oregon, however, is that, at the Washington Roundtable, when George Weyerhauser and T.A. Wilson of Boeing speak, it's like E.F. Hutton commercials: everyone listens. In Oregon it is not quite that way. We have a lot of balanced peer power, if I can use that term, and a real disparity of interest in what the problems are. If you go to the high tech community, it's predominately education and particularly higher education. If you talk about the timber industry, it's the allowable cut. The issues go on

and on. In Oregon about two and a half years ago, a series of articles and editorials in the Oregonian and Business Journal discussed the perceived lack of private sector leadership. Some of the editorials spoke of "empty saddles" or "leadership vacuums." And at the same time there were tremendous swings in the economy--from an Oregon peak in 1979 to a recession that has been going on since that time. Also significant changes in the behavior of legislatures in Oregon, Washington and other states.

In Oregon there continues to be a perceived lack of direction. I have interviewed many people now from all walks and diciplines, and the one thing that I recognize is this constant frustration when trying to identify a leader. The Glenn Jacksons and the Tom McCalls are gone, and the void hasn't been filled with some magnetic personality. There seems to be no coordination, no blueprint; communication is ragged, and there is no vision. Oregon has a more unstable economy than Washington, and we do not have a Boeing, so we do not have our timber industry problems offset by a major air frame industry. Even Idaho is doing better in many catagories than we are. The state's five-year forecast that we presented to the directors a week ago Wednesday indicated a bleak future for this state. Such a forecast is obviously driven by attempts to estimate revenue, but we could easily see that the next five years are going to be below the national average. In fact, it will take five more years to get to the '79 peak and we will still be eight percentage points behind the U.S. national average in growth. These projects are of great concern to the directors.

There will be continued losses of jobs in our resource and commodity-based industries like timber, agriculture and mining, and those will be permanent losses requiring significant retraining. High tech will not replace those losses and particulary not at the same value. So we are going to experience massive restructuring in the State of Oregon and move very rapidly from the industrial to service to the information economy.

The futurists tell us that education will be the largest business in the U.S., and I believe that, particularly when I look at the forecasts. The legislature in Oregon set up an Oregon Futures Commission two years ago and it is now concluding its work and will be submitting a report to the legislature in January 1986. Their forecast indicates a dramatic series of changes for many industries and services in the next 25 years. Education, as you know, will be going through profound changes. The demand for educational services will be enormous. All solutions to problems that are projected indicate a need for education--for the unemployed logger, the millworker, the farmer, the manufacturing line worker, the high tech engineer with a half-life of about three years, and the many people who will be stymied in their career growth and will return to school for retraining or education in different career pursuits. Entrepreneurship will be a driving force for our economy, moving from the service to the information economy.

We recognize that the education community is a source of knowledge that the Oregon Business Council desperately wants as a partner. We are looking to you to assist us in research and debate, and to create forms, and to join us in communicating our needs to the rest of the state population and government.

We anticipate putting together a long-range plan in order to stimulate a vision and direction for Oregon. So we are taking a look at all the primary indicator areas and trying to identify one to three of the most significant actions within that indicator, and then trying to prioritize those into a very condensed list. At that point, we are coming back to you, the education community, and we are not going to be bashful about asking for support, help and research effort to aid us in understanding those key areas better. We want to take that agenda out to government and other areas and ask for support, understanding and debate in order to create some compromises that will be acceptable to us all.

The other thing that I found is that Oregon didn't have the magnet issue that Washington had. The Washington Roundtable had an immediate issue with bond ratings--WPPSS, the funding of education, the economy downturn, the sales tax wasn't supplying adequate program revenues. Therefore, they immediately gravitated around that and the impact on education. So they had two pressing target issues initially that really got them formed. In Oregon we've been struggling with a tremendous array of issues. But before we start looking for these long-term solutions and strike up our alliances, I would like to ask you some questions, because we have been asking them of ourselves and they reveal the difficulty of trying to get an organization like this primed and moving. Collectively, what do we really want for our state? Do we want economic development? Do we want quality education for our children? Do we want to pay for the necessary and consistent public services and infrastructure that goes with it? Are we willing to accept less than the national average in economic growth and prosperity? How do we come to a workable compromise on key environmental, social, political and economic development issues? If you don't have a magnet leader, where and when do all important constituent groups in Oregon sit down together at the same table to hammer out an action agenda for Oregon's economic future? When will we then sit down as a region of Oregon, Washington and Idaho and deal with our similar problems? How do we develop consensus and communicate a shared vision for our future? Where does the leadership come from to make this vision a reality? Government? Business? Education? Other groups? Can we forge a new partnership for Oregon's economic future?

Well, at the Oregon Business Council we believe there can be a high level of cooperation between the public and private sectors of this state, although we don't claim to have the answers at this point. But we are working to understand the economy better and to define its priorities, and we do realize that there is a need for vision and an agenda of critical issues, and there is a need for goals and an action plan. And particulary, there is a need for communication among business, government, educators, labor and the key stakeholers to create an understanding and a focus. There is a dramatic need for a solid partnership to attack the issues that we face in this state. The OBC intends to create that agenda and bring it to a common table, not with the idea that we have the finalized agenda, but rather to have something we can sit down and deal with and try to come up with compromises. The vision involves economic prosperity for Oregon, while maintaining a high quality of life for our citizens, but this won't happen on its own. The issues we are grappling with today, such as balancing the tax structure, funding quality education and revitalizing our ailing, basic industries, are all part of the bigger picture.

The Oregon Business Council will work with the rest of the state, and particularly education, to develop a collective vision for Oregon's future, help to frame the targets and write an implementation plan called an "Oregon Action Agenda".

Thank you very much.

Business Perspectives on Using Data
for Improvement and Accountability

Martha Darling
Washington Business Roundtable

I am delighted to join you here today. I am pleased also to recognize a face or two in the crowd from the State of Washington. We've had quite a bit of contact with the education community in Washington, and it is obviously from that perspective that my remarks will come. Just in the interest of fair disclosure, I am a Vice President of Seattle First National Bank and have been on long-term loan from the Bank to the Washington Roundtable for almost two years to head up the education study.

I'll tell you a little bit more about the Roundtable itself. Dean Mosier alluded to its two and a half years of existence and the fact that education was one of the first two issues that the Roundtable took up. The Roundtable is made up of 34 chief executive officers in the State. It fluctuates up and down; if you sell your company, you're out. (It's a pretty harsh set of rules. Presumably there are counterbalancing factors from selling one's company under certain conditions.) There are also two citizen members--the sort of distinguished citizens of the State who have been involved in all kinds of things.

The goal of the Roundtable is to apply the knowledge, creativity and leadership resources of the companies to long-term problems and challenges facing the State of Washington. Now that sounds fine. How is it applied? The Roundtable took on two items at the start and intends to keep its agenda limited at any given time. Those two were state fiscal policy--debt management, pension funding. Then there was education. T. Wilson of the Boeing Company was the first chairman of the education committee; he is now Chairman of the Roundtable. After some months, it was determined that people who had full-time jobs were not going to be able to handle on a part-time basis the magnitude of the task looming ahead. This realization led to a recommendation to the Roundtable that a major commitment of resources be made by the companies. Out of that came Seafirst's long-term loan of me, plus a commitment from companies to loan executives full-time for periods that have been averaging four to five months, to work on the education study.

Our approach was to identify priority issues on the basis of talking with a lot of people from education and from the larger community. Those took the form of questions such as: Is the curriculum adequate? If not, what should be done? We asked similar kinds of questions about student testing, teacher compensation, teacher evaluation, teacher preparation, the role of the principal, early childhood education programs, and so forth. In each case we asked, are things adequate? If not, what should be done?

Now about the topic at hand, which in my particular case is the business perspective on using data for improvement and accountability. Educational quality and concerns about improvement have been traditionally defined and measured by the character of the inputs--per pupil expenditure, teacher preparation, class size--we've all seen these kinds of charts. We have also looked at processes--planning systems in place in the schools, training for personnel in schools and so on. Now--and the business community certainly has

been a part of this new thrust--there is a greater focus on outputs, student performance on achievement tests perhaps being the most obvious. The question of how to produce higher student achievement has now somewhat overshadowed the question of how to be a better teacher.

These are two different perspectives on the educational enterprise. I think it is very important to see the shift of attention to outcomes, business and the outside community are looking at education more closely and as new monies are sought. The fundamental question regarding use of the new money is what are you getting for what you spend? To say that there is better teaching going on without being able to cite the product (higher student achievement or some other outcome measures) is not going to get you very far. As I say, this is a natural kind of thought on the part of business, and it does not exclude a concern with inputs and processes. In business--and this is something that you all appreciate, I am sure--a lot of money is put into inservice training, especially the higher tech you go. It is shameful that education does not invest significantly in a process presumably designed to make better teachers. The Roundtable has not ignored that issue, but, after you give inservice training, do you have any measures to tell you that you have gotten anything for it? You know better than I the amount of Mickey Mouse stuff that goes on under the rubric of "inservice," and under the rubric of "continuing education credits". There are worthwhile programs as well. Until we can start sorting out the one from the other, I think it is going to continue to be very difficult to get public monies where they ought to be going.

When the Roundtable approached the education topic, we began by making the naive assumption that certainly there would be some descriptive brochure telling us about the governance and the financing of the educational system in the State of Washington. But, did it exist? Not at all. The result of that particular discovery was a project that required a wall roughly this size (indicating the wall) at the Boeing Company to chart different players and the lines that connect them. It took a wall to accommodate the education system. When people saw the wall, they could say, "Well, no, that's not quite right; it really works line this...." And the little name cards and the lines would be moved. More than one person--especially those from the legislature--remarked, "Now this would really be useful to have on paper. Coming to Boeing to look at this wall every once in a while is not the most efficient way to make use of this information."

The result--affectionately known as the "Off the Wall" project--has been a booklet called Educational Governance and Finance in the State of Washington put out by the Roundtable. Recommended for bedtime reading, it is a major early Roundtable contribution--describing these systems for the first time.

I recite this experience to highlight two major problems relating to data about education in the State of Washignton--and I suspect elsewhere, from what I have heard. First, there is much data but little information. The second one derives from that fact that we have a highly decentralized system, as many states do, with a strong tradition of local control. Forget the fact that the State of Washington now pays 78 percent of the bill; the local control tradition is still hallowed. That means that a lot of information exists at the district level which is not centrally available, or, to the degree that it is collected centrally, it is not comparable. Definitions vary this way and that way. Some would say that there is protection in this lack of clarity. But I think times have changed as the chief state school officers have

recognized, with their study directed at identifying valid indicators of school effectiveness, and developing greater standardization of what is being measured in the schools.

At any rate, lacking much needed information, we resorted to visiting a lot of school districts. In the course of our study of 15 priority K-12 issues, our loaned executive analysts visited no fewer than one-third of the State's 298 school districts. This map (displaying a map of Washington) shows the districts in every part of the State where we visited. It was very enriching for the study to get the real flavor of what is going on in the classrooms, see the variations that make it ridiculous to generalize across districts, but also to note some of the kinds of conditions that do make it possible to generalize across districts.

We also did a teacher survey. In cooperation with the Washington Education Association (WEA) we mailed the survey form to 5,000 teachers in the State, one out of every seven classroom teachers. WEA helped us word our questions so that they would be more meaningful to teachers, and this was very helpful. We had a return of over 2,000, which is about double what anybody expected. The respondents provided a large amount of information on items ranging from working conditions--which as you might expect were deemed pretty horrible--to attitudes of students and their preparedness to learn, attitudes of parents, views of school administrators, availability of inservice, summer work, academic course work, and so on. We were able to stratify that information by district size, years in teaching, and a number of other features. Finally, we did quite a bit of sourcing in other states, talking on the phone with education leaders and political decision makers, and talking with some of the national associations about what they knew about what was going on elsewhere.

With all of that as preliminary, let me get on to the data we collected and what we did with the information. As you can imagine, the attitude in the Washington education community about the prospect of this business group coming in and doing a green eyeshade job on education was not exactly positive at the start. There was suspicion that we would say, "If you cut budgets here and cut out these adminstrative positions there, education will improve." As things went along, and as we adopted the method we did, I think we gained acceptance. While our findings were not always in accord with what educators thought was appropriate, people did seem to understand that we were not coming in with our minds made up, we were not seeking only to validate some notions we already had. Instead, we were sincerely interested in trying to understand what the enterprise of education was about. That is in marked contrast to the approach taken by some business groups in other states. I think you all know that Ross Perot and the government of the State of Texas were seen as pretty much rolling over the education community in instituting some of their reforms. California and Minnesota hired outside consultants, and you know how popular consultants are.

On to our issues. The first one I will talk about briefly is student testing. There are actually two issues here. One was statewide student achievement testing on a standardized basis. The other was minimum competency testing. Until this year, the only standardized student achievement test administered statewide was at fourth grade level. It was on the basis of that fourth grade test that the State Superintendent of Public Instruction would boast periodically about the quality of Washington's education system--that

test combined with the SATs, which also indicated that Washington was doing quite well nationally. As you might have already concluded, there are problems with both of those measures, and it did not take a great deal of grounding in education to decide what those problems were. For one thing, the fourth grade test given in October of the fourth grade is really a test of third grade achievement and it is hardly a measure of 12 years worth of education. On the contrary, there were some strong suspicions that the problems really began in the late elementary grades, got worse in the middle school, and, with a 25 percent dropout rate in high school, maybe culminated there. Fourth grade did not seem to be quite adequate as a measure of anything in particular.

In 1984 the legislature instituted an eighth grade test and the Roundtable advocated the addition of a tenth grade test. We believed that these three measures would give some indication through time of what was going on in the school system, and would also yield information that could be used for diagnostic purposes by the school districts. We agree that test results often are misused. For example, when you compare the relatively prosperous district with the relatively poorer district, that relatively prosperous district is always going to look better. That does not mean that they are doing what they should be doing with those kids. For that reason we recommended that test scores be reported in two ways: one is the raw scores, and the other is demographically adjusted, so that you can compare like districts.

The legislature passed the tenth grade test bill this last Spring without the demographic adjustment, but we will continue to be visiting with them about that.

Now about the SATs. In the state of Washington, 16 percent of our high school students take the SAT. When you take a look at the national rankings, you see that for almost all of the states that are high in the rankings, only three, four, six, seven, ten percent of the kids are taking the tests. It does not take much logic to conclude that there is some selectivity going on as to who is taking those tests...perhaps the students who are aspiring to go out of state, to the Ivy League? Anything that uses the SAT on that basis, such as the Secretary's Wall Chart, is ridiculous, misleading, and frankly gets to the point of simply being dishonest. We tossed out the SAT test after we adjusted it with our Washington Pre-College Test results, which a larger percentage of kids take. On that basis Washington fell below the national average. The State Superintendent's office has not given any publicity to that.

All we are saying is that if you intend for test scores to be useful feedback devices, you must choose and use them carefully. Which moves right along to the minimum competency test. If there is one area that one would have guaranteed that business would take a positive position, this is it, right? Minimum competency: You set a standard; you get over it or you don't. It was the first real test for the Roundtable, in the Spring of 1984. As a result of our study, the Roundtable took a position in opposition to a state minimum competency test for high school graduation. This position was an experience base in Washington and in other states. From our review of minimum competency tests nationally, we found that after they had been in operation for a while, only one to two percent of the kids actually failed to graduate from high school on the basis of test failure. We said, "This is an interesting coincidence of statistics." We looked more closely and found that

this remarkable statistical regularity was achieved by dummying down the test. Political heat said you could not tolerate more than about that level of failure. If you needed to to reduce your test to a tenth grade level to achieve it, you did so. If you had to reduce it to an eighth grade level, you did so.

At this point we asked, "What kind of benefit is minimum competency testing if it so distorts the activities of many school systems in order to get kids over that hurdle?" We were particularly concerned with the shifting of resources from higher order skills development to remedial courses because of legal requirements. We looked at the states which have a MCT requirement. They tend to be states with relatively lower educational attainments. We said, "This is not for us." To achieve the sorts of goals that minimum competency tests are supposed to be associated with, we thought it was better to concentrate on our records on high school curriculum, the standardized achievement testing, and remedial course funding, combined with some preventive measures in the early childhood area. We determined, in effect, that a minimum competency test was no indicator of any improvement. We also looked at minimum competency testing as it existed in a few Washington school districts, and concluded that many are on very shaky grounds. So much for minimum competency testing.

Another area that I will mention briefly is teacher compensation. Teacher compensation is determined at the state level, and the State of Washington uses a schedule based on seniority and education--two false proxies, not always accurate in my opinion, for excellence in teaching ability. First, we looked at career comparisons with industry. We asked how a teacher's experience on a dollars-per-day basis worked compared with somebody in industry with a comparable initial degree over a period of 20 years. There were three significant problems. Entry pay was too low. At 15 years the teacher pay topped off--plateaued. Finally, very good teachers and so-so teachers at similar levels of experience and education received the same pay; performance was not a factor. The overall result was that teachers in general were reasonably well paid compared with workers in industry, but good teachers were underpaid.

The Roundtable looked broadly at different approaches to teacher compensation, including systems in place or under implementation in other states. After studying various proposals, the Roundtable developed a career ladder/mentor teacher system which we recommended to the legislature. While the idea was discussed and debated extensively in the state capitol and elsewhere, it represented such a change from the current system that action was deferred in favor of more study. The Roundtable will be back on the issue of performance-based pay for teachers, an idea whose time has come, in our opinion.

The final Roundtable recommendation I will highlight addresses "time on task", often considered in terms of the length of the school day and year. Our review of experiences with longer hours of schooling in other states and nations, combined with a look at how existing time is used, led us to conclude that the economist's "law of diminishing marginal utility" was clearly relevant. Many of you are more familiar than I with the Academic Learning Time research, one of whose basic messages is that we are perhaps only one-third "learning efficient" in our use of the current school day. While

being on task 100 percent of the time is unrealistic--and counter to human nature--an increase to 50 percent would bring huge benefits to both students and teachers, and at very little additional cost.

We then turned to several Washington school districts which had undertaken programs aimed at increasing academic learning time. On the basis of our visits, interviews and observations, we recommended a statewide academic efficiency training program. The program first called for a self-diagnosis phase, during which teachers and administrators determine the time lost from learning activities, and the policies at the district, school, and classroom level which contribute to or cause the loss. A second phase involves classroom management training for a limited number of teachers per school, who would then return and train their colleagues in techniques to increase academic learning time. The good news is that the legislature passed our bill, recognizing, we believe, both its tremendous potential benefits and its small cost. The state is now moving toward implementation, which we intend to monitor closely.

I cannot close my review of our experience in "using data for improvement and accountability" without a war story--a live example of data ignored.

The issue was class size. In last spring's legislature, the question actually began as a proposal to get more dollars to school districts. Under Washington's Basic Education Act, funding is provided on the assumption of 50 certificated staff per 1000 students; the original proposal from the State Superintendent was to increase the ratio over five years to 55:1000. In view of the cost projections on the one hand and the state's dwindling resources on the other, the proposal was scaled back several times and was eventually transformed into a program to reduce class size for grades kindergarten through three and for high school vocational education.

No appeal to research was ever made by proponents, only to intuitive feelings on the part of most parents, teachers, and school administrators that any class size reduction makes things better. Although the research on class size effects is reasonably clear on the benefits of reducing class size below 35, and indicates that classes of no more than 15 also demonstrate prominant gains, the degree of benefit resulting from incremental reductions in class size between 35 and 15 is significantly reduced. Costs, meanwhile, in the form of classroom space and teachers, are all too obvious. As a consequence of our review of the research, the Roundtable suggested that before embarking on the expenditure of large amounts of money, the state should fund a class size pilot to determine the student outcome effects of different class sizes, ranging from 30 down to 10. The legislators, however, aided and abetted by school people and parents, were not interested. More than $9,000,000--two-thirds of the new money provided to K-12 education--went for reductions in class size of questionable benefit.

Before finishing, a few words placing our work in perspective. Absent from our approach in Washington is a more comprehensive approach to K-12 education which could tell the Governor, legislature, the State Superintendent's office, business, parents, and citizens whether we are getting the education results we are paying for--and in Washington, the state provides 78 percent of the costs of local education. Perhaps we, as a state and as a region, are a little self-satisfied. We come off pretty well in

national comparisons. In contrast, I would cite South Carolina, which has one of the most elaborated systems of accountability in the nation following passage of their comprehensive Educational Improvement Act of 1984. A Division of Public Accountability in the state Department of Education was created with a three-year life to answer that fundamental question, "Are we getting our money's worth in improvement?" They have created a system to evaluate quality in all school districts through monitoring selected outputs and inputs. Data collection is a key element. While our needs to improve our educational system may appear less than South Carolina's, their approach to data collection and use may hold lessons for us all.

Thank you for allowing me to share my thoughts with you today, and good wishes on a productive meeting.

State Perspectives on Using Data
for Improvement and Accountability

Don Egge
Oregon Department of Education

It is nice to be among friends even though they may not be your own. I am anxious to hear what I am going to say because I found myself wanting to change some of my planned comments to include responses to things I have heard this morning. Before I begin, I however, have something important to say.

Bob Rath mentioned the educational reform initiatives across the country, and Oregon, as other states, has been involved with that movement. About a year and a half ago, the State Board of Education adopted what we call the Oregon Action Plan for Excellence. That plan, as I understand it, has three major themes running through it:

1. If you want excellence and improvement, change efforts need to take place at the classroom and school level.

2. Schooling should neither be totally state nor locally controlled; rather, each has a proper role to play, and these need to be identified. The Plan calls for the state to define what all students are to learn and to measure and it. The local district is to define the comprehensive cirriculum and determine the means to achieving both.

3. If there is going to be improvement and excellence at the local level, then local schools need to develop and maintain the capacity for self-renewal. All other agencies concerned with the educational system have a responsibility to help the schools build that capacity, and the state has a special obligation to establish a support system to help them to do so.

This conference, therefore, will surely help us to understand how to measure and monitor implementation of our reform initiatives as well as changes in local and state performance.

My assignment is to talk about state perspectives. Rather than discussing the same issues that my colleagues will be sharing with you later, I will offer some reflections I have had from my recent six-week internship in Washington, D.C. with the indicators project at the National Center for Educational Statistics.

Educational policy making takes place at all levels--the federal level, state, school district, and school. In the absence of clear policies established by these groups, you can often find individual teachers setting and implementing policy, whether we participate in the policy making process as advisors, deciders, implementors, or clients, we have an interest in data and information. We have a tendency to think about policy making as something that takes place behind closed doors in smoke-filled rooms, and in fact, policy making can be a very messy

process. Indeed, some say that there are two things you never want to watch in the making--laws and sausage. While not all policy making is as messy as I have been suggesting, we are seeing policy making in a more open setting today, and this can be cumbersome. There is more interaction among levels and with different groups than ever before, and individual persons are now able to affect policy at a variety of levels.

This is an interesting time because, as was suggested this morning, we are said to be in the middle of a paradigm shift in our society between the Industrial and the Information Ages. This means that people and organizations have more and more knowledge about data--how to use it, where to get it, and how to apply it to effect the results that they want. When you mix that with the consumer movement of the last 15 years, the effect is that different interest groups are vying for access to the most information so as to sway the public and to sway the policy makers and their direction.

How many of you know where Grays Harbor City, Washington is located? My mother lives in Grays Harbor City, a thriving community at the turn of the century, now there are maybe 20 homes in that area. It is just outside the community of Hoquiam where I was raised and educated. Hoquiam is an Indian name which means "hungry for wood." Now if you can picture the Hoquiam River coming down and emptying into Grays Harbor back before the turn of the century, logs and branches were piled up on the delta. The Indians observed the situation and said "hungry for wood." So Hoquiam became the name of that community. When the settlers arrived, they found not only a pile of wood, but a delta full of water. They hauled the wood off to sawmills, took the sawdust and filled the swamps, so that a community could be built on the site. Supply and demand were reconciled to solve a major problem. The transformation of the wood into the more useful sawdust has an analog in the translation of data into information which is meaningful and useful for school improvement decisions.

In recent years many large-scale studies have compared nations, states, districts, schools and even classrooms. A lot of the publicity has been given to these investigations, and they have produced valuable information for use in schools and classrooms. The findings from these studies have caused state departments of education to take a greater interest in defining which dimensions of schooling should be measured, mointored over time and reported to be clear and public about educational performance. These are important concerns for several reasons. The publication of data has brought education to the attention of the public and has made it an issue of enduring concern. Presenting accurate data may increasingly aid local, state and national policymakers in understanding the consequences of policy change and aid them in implementing policies once they are adopted. Finally, sharing educational data makes educators more accountable to the public.

So, as the states work to influence the collection and reporting of data, local school district personnel ought to be concerned about the ways this will affect them. Just as the states are struggling to develop a clear connection with the federal government, so local districts in many states are trying to establish some kind of relationship with their own state. This is the situation in Oregon at the present time. At the state level we are working to produce the right kind of data and information and report these in a meaningful, positive kind of way, without negatively affecting the many excellent assessment systems that have been developing in local school districts in recent years.

The Council of Chief State School Officers recently established a center on assessment and evaluation , appointed a director, and is beginning to define terms, establish criteria for selection of indicators, select indicators and establish data bases to help states in their work. The Council is trying, I believe, to establish a kind of infrastructure, or at least a connection between state and federal levels. The Center's work should be helpful to us in our individual states and even in local school districts. There are also a variety of other national, state and local activities underway across the nation in selecting, measuring and reporting indicators.

Until recently we in the educational system have not made fully effective use of data and information, either for our own management purposes or for communicating with the public. One reason for this is that we have not had very good tools for the collection, analysis and interpretation of data. There are, of course, many complexities in the educational process which make it difficult to have very simple, direct kinds of measures. However, many improvements are being made in the wasy we specify and measure educational effectiveness. With these kinds of activities comes the increased visibility I mentioned earlier. Whenever you start recording a variety of data, you suddenly make your institution--whether it's a school, a school program, a district or even a state--very visible. That can produce both positive and negative responses. One potential negative effect--and one those of us here have probably all experienced--is that when we are open and honest and direct in revealing a weakness in our system, our detractors sometimes sieze upon this and criticize us harshly. We need to learn to anticipate and cope with these situations. Perhaps the business community can be helpful in explaining to the community at large that every enterprise must monitor key indicators of condition and performance in order to make changes and adjustments which bring improvement.

One of our difficulties in monitoring and making needed adjustments is that schools have very diffuse goals. If you only measure the basic skills at fourth grade, you're only just touching on the tip of the iceberg. We have, in addition to instruction, other functional responsibilites such as socialization, custody control, evaluation, and certification. And although we are accountable for those functions, we frequently lack good data on how well we are doing in these noninstructional areas. Thus, we have a major responsibility as policy makers or advisors to policy makers to select indicators of performance which will be representative of our systems.

Of course, legislatures, state superintendents, state boards and local administators and boards have always held up sets of indicators and though ofent randomly selected they have been used to defend positons. They might be simple things like class size, costs per pupil, student scores, achievement tests, and dropout rates. So it is not that we haven't had some measures; it's just that they have not been a cohesive group of indicators, and they have not covered all of the major areas of activity for which the educational system is held accountable. In choosing additional indicators, however, we must reflect the real education system as close as we can without specifying so many indicators that the monitoring process becomes unwieldy.

When we select indicators, we have to think carefully and in an organized way. To illustrate this process, let me suggest a simple model which represents a framework for looking at indicators actually used by various states though it coulbe be applied at the local level. It covers system performance by organizing indicators around resources, process amd outcomes as well as variables for measuring context. I developed the framework and gathered these data as part of my work experience in Washington. (See the Attachment to this paper.)

The first set of indicators are outcomes.The first group of outcome indicators covers academic breadth and depth of student achievement. The second is concerned with student progress and transitions, either in the school system or as students move outside the system. Third, we can look at equity issues of access, participation, and the impact on special populations such as the blind, and the learning disabled. We can also look at other program and services, and finally at indicators of community confidence.

Let's look at some of these relative to academic breath. Some states are using test scores on high school exit examinations as an evaluation across the entire system. From the Secretary's Wall Chart, we find a new indicator, "Percentage of State Gains to meet the President's Challenge on SAT Score Change." Other indicators of Academic Depth, might include SAT achievement scores or state achievement test scores.

For student progress there are many potential indicators--for example, the percentage of students ready for first grade. Peformance can be monitored overtime to determine whether readiness programs, or kindergarten programs are effective. Percentage of grade level repeaters is a transition indicator. Looking at school completion, secondary attainment might include grade level attainment, so that instead of just talking about dropouts, you could measure the grade levels actually attained by student. The educational aspirations of senior students would not necessarily be very hard data, but the indicators might be useful to see how your guidance program might be influencing student expectations. With regard to equity, useful indicators might include the percentage of special education students mainstreamed, if mainstreaming is a major goal. Community confidence indicators include parent and student satisfaction rates.

Let's turn our attention, to process indicators. Included are program content, instructional climate, support to instruction, and program productivity. One of our problems with process is that we really have a very limited understanding of our technology. This is something that is confounding to those who have never been in the classroom, because when you are in an elementary classroom with 25 youngsters who have mental ages ranging from 7 to 15, you have 10 to 12 content areas to cover, and you have runny noses and students with the flu, and you are constantly making adjustments and decisions so that, what actually happens is a complex process based on pans, experience judgment.

It is almost as if we have a "black box model" which is used in many areas of research and development. According to this model, we measure input and output while establishing some hypotheses about what it takes to produce the desired results. We have all learned, however, that there is more than one way to skin a cat, or deliver results, and because of individual student learning modalities and rates, we must be able to apply a whole variety of technologies to be able to produce the results we want. Given that kind of a model, we can begin to think about a way of looking at the indicators we select.

Some important measures of breadth of content are number of programs available, number of student slots available, and number of classes taught by teachers out of the field. We might choose to measure engagement, the number of students served in various kinds of programs; or challenge, the percentage of students completing upper level courses, or trends in difficulty in courses chosen by high school students. School climate variables include such things as satisfaction rates and staff perception of the threat of crime and violence. For support to instruction, we can look, for example, at the percentage of classrooms with access to computers; the professional and nonprofessional staff ratio; and the number of improvement activities. Productivity improvement measures include ratios such as program credits earned divided by direct program costs, or for the entire school, the number of credits earned by students divided by the full-time faculty, to determine whether you are using flexible means of granting credit. If you are looking at a support program like guidance and counseling, you might want to monitor the time available for counseling and the time actually spent with students.

Next, we turn our attention to the resource indicators--human, fiscal, and community. Looking at human resources, we'll be concerned with indicators of the quantity and quality of teaching force. The fiscal effort is something we have often looked at; here we measure it not only from the community base, but also the impact on the individual teachers, for example. When reviewing expenditures, we have typically looked at the instructional cost per pupil, but there are several other things we might choose to measure. Finally within the area of resources, we might look at the effort of community organizations, the kind of contributions that they make. If a part of our model is to set a goal of increased community participation, then we can monitor that expectation in several ways.

The second major category with which we are concerned is that of the context variables that influence the system. The first of these are demographic ones. Looking at these, I want to point out that factors such as attendance and dropout rates serve to illustrate the relationship between context and outcome variables. With dropouts and attendance, the school can influence student decisions, but for the most part they are decisions of the family and individual student and these context. Looking at holding power, one need in our state is to move away from looking at a single dropout rate, in favor of monitoring a variety of indicators. We've been moving in this direction, looking at other indicators such as graduation rates, annual attrition rate, and so on, which helps the public to get a more rounded picture than is possible by presenting the dropout rate alone. If student pass away, go to a community college, or get a GED, they are counted in the dropout statistics, which is extremely misleading.

Other contextual variables to consider are those having to do with policies and mandates which affect schools and districts, and those having to do with economic conditions. We do not have time to discuss these today, but they are obviously major influences of educational decisions and operations.

The indicators of effectiveness presented in this compilation do not comprise a comprehensive set. It is important that whatever indicators you use they are defensible from the standpoint of how well they reflect the real world in your school, your program, your district, or your state.

My major point this morning is that we need to make better use of available data and create better information. Selecting indicators must be based on the goals you have for your system. We need to be aware that gathering and sharing more data and information can be expected to increase our exposure and visibility, but we need not fear this. Instead, knowing that we will be under greater scrutiny ought to motivate us to take steps to insure that we have accurate data and useful information to apply to policy making at every level.

APPENDIX A

A FRAMEWORK FOR SELECTING INDICATORS TO MONITOR THE CONDITION AND PERFORMANCE OF A STATE EDUCATIONAL SYSTEM

I. INDICATORS OF SYSTEM STATUS, A STRUCTURE

A. OUTCOMES

1.0 Student Achievement

- 1.1 Academic breadth in basic skills, general knowledge and aptitudes
- 1.2 Academic depth in subjects
- 1.3 Functional literacy
- 1.4 Extracurricular activities

2.0 Student Progress

- 2.1 Entry to school
- 2.2 In-School
- 2.3 School completion
- 2.4 Postsecondary transitions

3.0 Equity

- 3.1 Access to programs for special needs
- 3.2 Participation in special programs
- 3.3 Impact on special populations

4.0 Other Program Services

- 4.1 Student services
- 4.2 Media services
- 4.3 Auxiliary services

5.0 Community Confidence

- 5.1 Community satisfaction
- 5.2 Parent satisfaction
- 5.3 Student satisfaction

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC))	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																				
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV				
A. OUTCOME INDICATORS																						
1.0 Student Achievement																						
1.1 Academic Breadth																						
a. Achievement scores on standardized tests reported from local testing programs	SL							x														
b. Test scores on high school exit examination	SL													x								
c. Performance of students over time who participated in the special programs	SL																					
d. Achievement scores on standardized tests administered statewide at selected grades	NSL	x	x	x	x	x	x			x	x		x	x		x	x	x				
e. Performance of college preparatory students compared to that of nonpreparatory students on SAT and ACT	S													x								
f. State ranks on score change on ACT (SWC)	NS																					
g. State ranks on score change on SAT (SWC)	NS																					
h. Percentage of state's gain to meet President's challenge on SAT/ACT score change (SWC)	NS																					
i. Achievement of 9, 13, 17 year-olds in R, M, Sci (SWC, NCES)	NS																					
j. College bound student achievement as measured by SAT, ACT, PSAT (SWC) (NCES)	NS	x	x		x	x				x		x		x		x		x				
k. International comparison of math achievement at 8th and 12th grades (NCES)	N																					
l. Reading by race, ethnicity	NSL																					
m. Percent mastering the vocabulary necessary for an individual to function with a reasonable autonomy in our complex society	SL																					

*(N) National, (S) State, (L) Local levels

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																				
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV				
2.3 School Completion																						
a. High school graduation rates (NCES) (SWC)	NSL								x	x								x				
b. Secondary education attainment	NSL																					
c. Functional competency testing adults	NSL															x						
d. Percentage points to be gained to meet President's challenge on graduation rate (SWC)	NSL																					
e. Number of GEDs	S																	x				
f. Number of adults passing GED test	S										x											
2.4 Postsecondary Transitions																						
a. Activities of graduates the first year after high school (NCES)	NSL		x	x			x															
b. Remedial course enrollment of college freshman (NCES)	SL																					
c. College success of the state's high school graduates in state institutions of higher education	SL													x								
d. Increased percentage of students completing vocational-technical programs and working in the field of their training	SL																					
e. Freshman year grades in postsecondary programs	SL																					
f. Increased percent of students receiving high school diplomas on schedule	NSL																					
g. Educational level aspirations of senior students	SL																					
h. College entrants	L					x																
i. Percentage of vocational students placed	SL					x																
j. Postsecondary success in reaching destination	L																					
k. Percentage of high school students with early postsecondary entry	L																					

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																				
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV				
4.0 Other Program Services																						
4.1 Student Services																						
4.2 Media Services																						
4.3 Auxiliary Services																						
5.0 Community Confidence																						
5.1 Community Satisfaction																						
a. Community satisfaction rates	SL												x									
b. Employer ranking of satisfaction with work performance of graduates of the state's public school program	SL				x								x									
5.2 Parent Satisfaction																						
a. Parent satisfaction rates	L											x	x									
5.3 Student Satisfaction																						
a. Expressed adequacy of schooling by students	L											x				x						
b. Percentage of students satisfied with achievement of next step beyond school	L																					

B. PROCESS

1.0 Program Content

- 1.1 Utility (the relevance of the written curriculum for graduates)
- 1.2 Breadth of program coverage

2.0 Instruction

- 2.1 Opportunity for quality experience
- 2.2 Engagement in academic pursuits
- 2.3 Challenging students to participate in rigorous programs

3.0 Climate

- 3.1 Instructional leadership
- 3.2 Achievement expectations
- 3.3 Systematic and personalized instruction
- 3.4 Staff morale
- 3.5 Safe and orderly environment
- 3.6 Focus on task
- 3.7 Student and staff interaction

4.0 Support to Instruction

- 4.1 Curriculum materials
- 4.2 Supervision and assistance
- 4.3 Improvement activities

5.0 Program Productivity

- 5.1 Instructional programs
- 5.2 Support programs

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR NUMBERS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																					
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV					
PROCESS INDICATORS																							
1.0 Content																							
1.1 Utility (relevance)																							
a. Graduate rating of school orientation used in post-school experience	SL																						
1.2 Breadth																							
a. Number and percentage of students served in special programs	L												x										
b. The increase in number of students in drop out prevention programs	SL																						
c. Number of vocational programs available to students	L																						
2.0 Instruction																							
2.1 Opportunity																							
a. Number of classes taught by teachers out-of-field	SL												x										
b. Pupil/teacher ratio in selected subjects for grades 1 through 3 and 7 through 12	L																						
c. FTE Student/FTE Faculty Ratio (SWC)	L												x										
d. Length of school day in periods of instruction	L							x									x						
e. Length of school year in days taught	SL									x													
f. Enrollment by type of curriculum	SL																						
g. Compensatory education program in the state (SWC)	N																						
h. Average class sizes (ELC) (NCES)	L							x															
i. Class size by program	L																x						
j. Number of separate teacher "course preparations" during the day	L																						

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CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																						
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV					
h. Enrollment in selected academic courses	SL																						
i. Percent of high school students with personal career plans on file	L				x																		
j. Mean years of study in selected subjects	SL																						
k. State required Carnegie units by subject (NCES)	NS																						
3.0 Climate																							
3.1 Instructional Leadership																							
3.2 Achievement Expectations																							
3.3 Systematic and Personalized Instruction																							
3.4 Staff Morale																							
a. School personnel satisfaction rates (ELC)	L													x									
3.5 Safe and Orderly Environment																							
a. Degree of staff satisfaction with approaches to discipline																							
b. Disciplinary actions	L																						
c. Vandalism rates	L												x										
d. Vandalism costs	L																						
e. Student perceptions of the threat of crime and violence	L																						
f. Staff perception of the threat of crime and violence	L																						
g. Community perceptions of the threat of crime and violence																							
3.6 Focus on Task																							
a. The number of classroom interruptions	L												x										
3.7 Student and Staff Interaction																							

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																				
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV				
5.2 Support Programs																						
a. Total student contact hours (by counselor) during given time period divided by total available counselor hours	L																					
b. Total student hours of direct media center contact per year divided by annual personnel costs of media center staff	L																					
c. Number of meals of given standards served divided by total food service costs	SL																					

C. RESOURCES

1.0 Human

- 1.1 Quantity
- 1.2 Quality
- 1.3 Enhancing staff capacity (extending impact of resources)

2.0 Fiscal

- 2.1 Effort (commitment to support school programs)
- 2.2 Expenditures (actual payments for school)

3.0 Community

- 3.1 Effort of community organizations
- 3.2 Citizen and parent participation
- 3.3 School status

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																				
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	VA	WV				
I. RESOURCES																						
1.0 Human																						
1.1 Quantity																						
a. Number of teachers per 100 pupils (alterable at the district level)	SL																					
b. Average of regular faculty present each day (indirectly alterable by district policies) (ELC)	L											x		x								
c. Numbers of staff employed	L																					
d. Teacher supply and demand (NCES) (ELC)	NSL																	x				
e. Pupil teacher ratio (NCES) (SWC)	L																					
f. Pupil teacher ratio by program	L																	x				
g. Pupil staff ratio (SWC) (ELC)	L																					
1.2 Quality																						
a. Quality of teaching force (verbal SAT scores) (NCES)	NSL																					
b. Quality of teacher force (verbal GRE scores)	NSL																					
c. Percentage of teachers with advanced degrees	L				x																	
d. Certification rank of teachers	L					x																
e. Percentage of minority staff and teachers	L				x	x																
f. Teacher retention rate	SL													x								
1.3 Extending Staff Capacities																						
a. Span of administrative responsibility (ELC)	L																					
b. Professional/nonprofessional ratio	L																					
2.0 Fiscal																						
2.1 Effort																						
a. Percentage of revenue from local sources	SL					x																
b. Public school fiscal effort (NCES)	NSL																					

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																					
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV					
3.2 Citizen Participation																							
a. Number and percentage of parents and community members serving the school (ELC)	L						x						x										
b. Estimated hours of volunteer service during the year (total and as a percentage of ADM)	L						x						x										
c. Interagency cooperative agreements	L																						
3.3 School Status																							
a. Percentage of schools holding regional and state accreditation	SL				x											x							

II. CONTEXT VARIABLES

A. DEMOGRAPHIC

1.0 Students

- 1.1 Characteristics
- 1.2 Enrollment
- 1.3 Attendance
- 1.4 Holding Power
- 1.5 Special Needs

2.0 Community

- 2.1 Characteristics
- 2.2 Attitudes

B. ACROSS LEVEL POLICIES AND MANDATES

1.0 State graduation requirements
2.0 State graduation tests
3.0 Teacher certification requirements
4.0 Competency testing programs
5.0 Incentives for school improvement

C. ECONOMIC CONDITIONS

1.0 Growth in personal income
2.0 Consumer price index
3.0 Community employment patterns
4.0 Employment rates
5.0 Community ability to pay

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CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR NUMBERS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)	Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																					
		CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV					
I. CONTEXT VARIABLES																							
A. DEMOGRAPHIC																							
1.0 Students																							
1.1 Characteristics																							
a. Racial/ethnic composition	NSL					x																	
b. Percent of students speaking a language other than English at home	NSL																						
c. Percent of students from families receiving AFDC	NSL																						
d. Parents' educational attainment	L																						
e. Parents' occupation	L																						
f. Percent economically deprived	SL					x																	
1.2 Enrollment																							
a. Percent of students enrolled continuously throughout the year	L																						
b. Percent of pupils who are non-minority—a surrogate for cultural difference	L																						
c. Percent of pupils who pay full lunch price—a surrogate for socioeconomic level	L																						
d. Percent of pupils who are not deficient in English—a surrogate for bilingual complexities	L																						
e. Ratio of student enrollment to population by age (NCES) (ELC)	SL																						
1.3 Attendance																							
a. Average percent of pupils present each day (indirectly alterable at the district and school levels) (ELC)	L	x				x	x			x			x	x				x					
b. Truancy rates	L										x	x											
c. Percentage of pupils in average daily attendance	L																						

CLASSIFICATION STRUCTURE WITH INDICATORS OR INDICATOR AREAS (RECENT NATIONAL ACTIVITY KEY: SECRETARY'S WALL CHART (SWC), INDICATORS: STATUS OF TRENDS (NCES), EDUCATION LEADERS CONSORTIUM (ELC)		Potential use at N,S,L*	TENTATIVE STATE-LEVEL EXAMPLES																						
			CA	CO	CT	FL	KY	ME	MI	MS	NV	NY	OH	OR	SC	TX	UT	WA	WV						
I. ACROSS LEVEL POLICIES AND MANDATES																									
1.0 State Graduation Requirements	(SWC)	NS							x																
2.0 State Graduation Tests	(SWC)	NS																							
3.0 Teacher Certification Requirements	(SWC)	NS																							
4.0 Competency Testing Program	(SWC)	NS																							
5.0 Incentives for School Improvement	(SWC)	NS																							
II. ECONOMIC CONDITIONS																									
1.0 Growth in Personal Income		NS																							
2.0 Consumer Price Index		NS																							
3.0 Community Employment Patterns		SL																							
4.0 Employment rates		NSL																							
5.0 Community Ability to Pay																									
5.1 Per capita income		SL																							
5.2 Assessed value per child		SL					x																		

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Policy and Research Issues in Using Data
to Promote School Reforms

Michael Kirst
Stanford University

The negative economic factors such as you experience in the Northwest with various kinds of natural resources, some losses of public confidence, competition for education from child care funds, and so forth--these kinds of problems are widespread. The situation with education funding is that it lagged behind inflation between 1980 and 1983, and then it turned around from 1983 to 1985 and is now going up much faster than inflation nationally and in most states. What has turned the funding situation around is the educational standards movement, the educational excellence movement, and a feeling that these higher standards will improve education in a major way. And supporters of increased education funding naturally want to see results. I attend the Southern Governors Conference every year. The action down there is unbelieveable in terms of raising taxes to support education. And the governors are now saying to the education community, we need some results from you people to show that we're going somewhere.

To respond to such needs, the question is, how do we get some sophisticated results, and where are we in the state data system in our attempts to get from here to there? I'll describe what we're doing in California, not as a particular model, but just to show you what's going on. First of all we need to understand that the nature of these state reforms is quite different from what we've seen in the past. Most of what we got in the past were programs. The big money was spent on programs for target groups. There were programs for the disadvantaged, the handicapped, the bilingual, sometimes preschool and so on. In contrast, what we have in this reform is a sort of omnibus bill, a welter of activities that aren't interconnected as a program. We have more testing, as we heard this morning. We have higher graduation standards, we have longer days. We have teacher career ladders, teacher incentive payments and we have various requirements for teacher evaluation. Sometimes we have an old-fashioned program, such as a new preschool program, or we have a whole set of activities that are not like the Title 1 program.

Generally, funding of these new reforms has not involved specific amounts of money tied to specific interventions. Instead, the university raises its standards for entrance, and then there's an increase in graduation requirements at the state and local level. Nobody has costed that out; rather there's just a flow of money out of the general fund from the state level to support some of these activities. That is, the amount of support is not based on figuring out what it costs to raise graduation requirements, or what it costs to put in a particular kind of teacher evaluation system. It's much vaguer than that. So, we don't have programs per se and that's a problem.

As I looked at the state data systems, I realized that the reason Martha couldn't find a lot of the data was that the state data collection procedures are selective. They tend to follow current policy rage. What have we been doing for the last ten years--prior to the 1983-1985 reform--had to do with categorical programs. So we collected data about categorical programs. Thus, we knew a lot in California about handicapped children, but we didn't know about what our teachers were teaching out in the field or what their qualifications were. We could tell you a great deal about categorical programs, and we could tell you a great deal about finance-equity issues--which had also dominated our agenda. But we had very little data about upgrading academic standards and improving the quality of the teaching force. In fact we didn't collect much curriculum data at the state level after the early '70's; and instead we went gung-ho on categoricals.

In addition, state data collection efforts tended to be uncoordinated. One division collected something from a categorical program for limited English speaking children, and another division collected a few things about the numbers of certified teachers. But no one was putting these data together at the state level or working to bring these data streams together to do policy analysis and establish some kind of "accountability program." There continue to be huge gaps. For example, we have almost no data in most states about middle schools. We tend to have more data about testing at the elementary and senior secondary levels, but the middle school remains a sort of dark continent of educational research and information. We also know very little about the community college interface with the elementary-secondary sector.

Further, we knew very little about teachers. Not long ago we thought there wasn't any need to collect data about teachers in California. We thought we had a surplus of teachers, and there wasn't any particular concern about the quality of teachers from the standpoint of state policy. So all we could say was how many of are teachers were licensed every year--that kind of information. We don't know who's teaching where, we don't know about the nature of the teaching force in any depth at all, and we find people very frustrated about this lack of meaningful information.

Moreover, there is a lack of local commitment to using the state data. Local people seem to feel, "Ah that stuff we send up to the state capitol, most of it doesn't relate to us. It's sort of a pain in the neck. We fill out the forms and that's that." There is not a local district and school site feeling of "Gee, these state data are really useful, and I use them for planning, so I really want to get my data back and fill it out accurately." One of the studies we did of our California Basic Education Data System involved asking who fills out the data gathering form and how much time do they take? We found that the forms get filled out in a quick, rather slapdash way, not with the kind of care you would have if you were going to base a local decision on it. Then, when we published and used these data, as I'll show you later, local people were saying, "This is all inaccurate. This isn't our school at all." And the state is saying, "Well, you sent it to us," so we're beginning to get a little bit more local commitment as the data are coming back to the state on a school by school basis.

Nearly all of the states that instituted these kinds of reforms just loaded the state data collection responsibility on top of the existing State Department of Education staff. They didn't expand the staffs, nor their analytical capacity in terms of dollars. Therefore, most of the state governments across the country report that they are overloaded; now states are beginning to get some good data in, but there is nobody available at the state level to analyze it.

Let me move now from these general comments about state data systems and talk about where we need to go from here. I'll speak first in terms of evaluating recent reforms and the impact of these state actions, and then give some specific examples.

Let me talk about some basic orientations one can use in terms of data systems. One of them is that the whole education system needs uplifting, and therefore what you need is a data system which looks at how the whole system is progressing. That's the view held by California, Texas and, to some extent, Connecticut. Another orientation you can take is that the school system is pretty good; that what we have are big problems in a few local places, so we need to find the "bad guys" at the local level and use the state data system for that purpose. That seemed to be the main interest in Wisconsin; they wanted to "get" Milwaukee. They weren't particularly interested in the overall system, so they wanted to find these good guys and bad guys out there.

A third orientation you can take is that we basically trust the local professional educators to do the job, and therefore our approach will be to feed them back the state and local comparative data and let LEA's do what they want with it. From this orientation one would not engage in a lot of state publicity, statewide targets, or comparisons among schools and school districts.

A fourth approach would be to decide not to rely on the educators a lot; to rely, instead, on the aroused citizenry and the parents, the business groups--the noneducation interests. From this perspective, state would have an enormous amount of local disclosure and give this information to the citizens in a reasonably readable form, an easily packaged form that they can understand. Florida has gone that route: They have a local school performance report for every school and they have a set of standards. These are mailed out to all the parents, published in the local newspaper, and Florida gives out awards every year for the most informative local reports by groups of districts. Woodville, Florida, had the best rural local report, and so on. That's basically a sort of bottom-up citizen approach to school improvement.

While I favor mixture of bottom-up and top-down approaches, most of the states' approaches have involved trying to assess the effects of multiple state reforms, and they're not quite sure how the different reforms interract. For example, California was providing incentives for teachers to experiment in their classrooms, while at the same time requiring use of a state curriculum. The first group of policies seemed likely to attract good people, and the second may repel them, so how would these two interact?

Let me talk now about seven approaches that I've been thinking and writing about for assessing state reform. The first approach that the states are being advised to use is some system of performance indicators. I'll come back to that and hand out the California example.

The second one involves asking the states to find out what the financial impact of these reforms has been; how spending has been affected. How do the internal local financial allocations meet these reforms differ by the type of school district you have? What do all these reforms and the state distributions to LEA's do to your state equalization plan? For example, when California pays all the money for mentor teachers, we give the same amount to Beverly Hills as we give to the poorer school districts. Meanwhile, we have a state equalization system. How do these policies fit together?

Another thing you can do is group programs by similar objectives and then compare their costs and effects. California has at least nine different approaches, for example to attract better teachers at the beginning level. We've raised the minimum salary from $14,000 to $19,000 in two years, we have loans, we have scholarships, and we're spending a lot of money on those. We've created the mentor teacher approach, we have a teacher trainee approach where we bring in people who do not yet have the normal education requirements. We can't fund all of these programs fully. Then we have the teacher mini-grant program, and so on. Which of these are the most cost effective? States should study this.

The fourth approach involves looking at specific programs. There are imbedded in a lot of these state reform packages of the old-fashioned type of program that would fit program evaluation. You could look at a preschool program, such as many states have, and you could isolate it as a program and begin to evaluate it under that technology.

Fifth would be to study the impact of several different state initiatives aimed at the same general objective, <u>without</u> comparing cost and effectiveness. One of the papers I've brought along has to do with the curricular change in California high schools in the last two years. Now I don't know what's causing all of this change, but we're seeing a lot of it. In comprehensive high schools math enrollments are up over 20 percent, science enrollments are up over 20 percent, advanced placement enrollments are up over 34 percent, home economics enrollments are down 22 percent, vocational education/industrial arts is down over 20 percent, business education is down also. Then we see big changes within the subjects; for example, social studies is up only marginally, but there is a big movement towards world studies and away from the newer social science electives of psychology, sociology and so on.

So, a lot is happening. Now, you can call that an input, or a process, or whatever you want to call it, but the legislators are very interested in that kind of data. They're saying, "well, maybe they do do something out there... .maybe this isn't just flushing money down while LEA's attend to the same old business." Now, I don't know what's taught in those courses--that's our followup study. California had a teacher shortage, as far as we knew, before science and math enrollements went up by 22 percent in the last two years, and I'm wondering who in the world is staffing these classes.

In California, at PACE, we follow 22 schools in depth--school that are representative in terms of their distribution and type across the state. I'm not sure that every school in the state can collect all these data. My view is that we ought to go in depth in some selective schools, such as the 22 we have been following. Moreover, the state policy people seem to think that these are adequate for at least gauging the initial impacts of their policies. Another thing that's revealed with that kind of study is that the biggest jumps in curricular change are in the lowest socioeconomic status schools. That makes interesting newspaper headlines and it's logical when you think about it. Where is Palo Alto High School to go in terms of increased academic course offerings? Most of the kids are already taking college preparatory courses. But if you go over to a black high school in Oakland, you'll see that they are undergoing quite a cirriculum shift toward more academic courses.

The sixth orientation involves what I call aggregate and cumulative effect studies. We're just now beginning these in California. Because these recent reforms have a whole bunch of initiatives in them, and you can't isolate the interaction effects of all of the reforms, what you need to do is study the effects of all the categories of reforms on individual schools. The way you do that is to use sample schools--22, 25 of them--and you look at things like the bottom-up enthusiasm, commitment to these state reform efforts, whether they even notice it, etc. So you look at the system's response in terms of the schools' commitment, interest, knowledge, and then follow over time how they change.

The last kind of study might be a cause-and-effect study, where you would attempt to sort out the cause and effects of all of the school site changes that are coming about. These kinds of studies are, I think, very far off. I'm not sure you'll ever be able to determine causes and effects precisely, because there are so many causes. Instead, I think we're going to be looking at changes and impact in a more general way and less at cause and effect.

Let me talk, then, about the attempt in California to create a performance indicator system. This handout is what each school gets, and then there's statewide handout. (See the attachment to this presentation.) This is the brainchild of Superintendent Bill Honig. His view was, "How do I keep the interest in reform and increases in state money going?" We all know that policy cycles run very fast in public education, and in California the fads come and go even more rapidly, so he's trying to keep education in the limelight.

The basic strategy is that many inidicators are better than a few. Many new measurement items are process oriented, such as time spent on curriculum, and those are interesting, as well as pupil outcome variables. You also need to do some kind of comparisons with similar schools. California schools, for better or for worse, are grouped into five competing leagues. Those leagues are around parent socioeconomic status and social context of the schools, so each school competes both statewide and in its league. Now in gathering data, we in California cast about in a hurry to figure out what the SEA had that could be put into a local site performance report, and found that we had more than we thought.

What are some of the problems with this kind of data display used by California? First, you have a problem of data reliability. The schools that didn't collect accurate course enrollment data are finding that it's coming back to haunt them. Data validity is a second problem--determining whether you're really measuring anything important here. This format also tends to obscure things. Larry Cuban, another professor at Stanford, says state performance indicators are a collection of quantities which only serves to feed the American mania for simple indicators like runs batted in and miles per gallon. There are all these aggregates, and the assumption is that more education is better quality. All this obscures what is actually going on at the local level. Reform will never take hold, he says, until the teachers really want it and will grab ahold of it.

On the one hand, studies of aggregate effects give you a picture that things are moving ahead. There has been very little risk for educators in the early years of these studies, because we are moving up. I think there's a general tightening of the curriculum across the country, and so education can look good on these curricular indicators. These findings have been received with quite some interest by a lot of state policymakers. The California governor has been fully funding the education reform program, saying, "They seem to be shaping up out there." On the other hand, Cuban charges that these kinds of data displays give too much of a surface illusion of change, when there really may be no change in the content taught. Other Stanford professors go on to argue that the increased science curriculum may be drivel and turning the kids off to science.

There were several things on which State Superintendent Honig wanted data, but couldn't get the data statewide. These were to be in local performance reports. Thus, he said, in essence, "Okay, this is a statewide performance report, I agree it is sort of superficial; but now we'll have local performance reports to supplement it. And the local performance reports were supposed to have such things as quality of the instructional program--including what kind of curriculum items are actually taught so as to get deeper into what's behind these state course enrollment trends. There were to be various kinds of school climate measures also, such as whether kids feel safe at school, the morale of the teachers, and so on. And, writing--how much writing is going on? We collect information on writing statewide, but we've had trouble measuring increases, because of definition problems.

Homework is a hot topic these days. People are talking about how the Japanese kids do three times more homework, and our kids are watching Miami Vice, and Dallas. So what you need to measure is changes in homework over time. California data indicate that kids are doing very little homework, but that it's been going up recently. Honig decided not to report that statewide; instead it shows up mostly as a local indicator.

Another indicator category is measures of community support and parent participation, such as how many parents participate in the schools. Some school districts have been running surveys on public confidence and community views of the schools in the local area. And you can look at awards and recognition of the local schools; have they gotten special awards? Another category would be participation and extracurricular activies by pupils. And, lastly, you can review various kinds of special needs programs.

Let me sum up by saying I think the educational data bases were caught short in most of the states when the recent reforms began. The reforms changed the agenda of education from categorical programs, school finance-equity, and standard input indicators such as class size, to academic standards and teacher quality. Those are the two keystones as I see the reforms--academic standards and teacher quality--and most state data systems were not really focusing on these. The reform groups I talked to across states are very aware of the comments made in a new book by David Cohen and Ellie Farrar, The Shopping Mall High School. For example, state policy focus in the junior and senior highs is on the middle tracks, the groups that were not having problems in terms of basic skills. The theme you hear from reformers is that we're trying to raise the whole level of the U.S. education system. To do that you have to focus on that middle group--the group that has traditionally been taking two academic courses and three or four other courses, then working half-time pumping gas, and not making a lot of trouble. You don't hear much about this middle group. That's why this attempt in California to assess the achievement by quartiles was very, very crucial. My daughter goes to a school that looks very good on the average, but that's because they have many high achievers who bring the achievement averages up, while the rest of the school does poorly. These breakdowns by quartile achievement represent a way to get at that disparity in school performance. California and other states are spending much more time on disaggregating the pupil population within schools by race and by quartile and by track, so as to look at them in a more sophisticated performance way. So far, state data systems have not kept pace with this new policy agenda either.

So, it's an exciting time to be in the data game. Things are changing rapidly and in a very interesting fashion. In my view California is doing some good things but I also I worry about the simplistic nature of some of it. I think we have to respond carefully to the changes that are happening, cautiously avoiding oversimplification.

1984-85 HIGH SCHOOL PERFORMANCE REPORT
TWO PAGE SUMMARY

This document describes the contents of the two page summary of the 1984-85 High School Performance Report, and it should be read completely before attempting to interpret the two page summary. Included here are: (1) an explanation of the two page summary; (2) a sample copy of a two page summary; and (3) a copy of California's statewide targets.

All quality indicators and additional school information which appear in the full-length School Performance Report are contained in the summary. Information on the summary is grouped according to subject. Numbered boxes are drawn around these groups to facilitate the following brief explanation. Complete explanations are contained in the full reports sent to schools, districts and county offices.

Quality indicators are presented with the change from the prior year, whenever prior year information was available. Percentile ranks of quality indicators, which compare each school with all other schools in its performance group, are shown. Percentile ranks are not provided for data considered to be additional school information.

1. The box numbered 1, in the upper left corner of the first page contains identifying information, including county, district and school codes and names, and a code assigned by the College Board to schools. This box appears on the second page, as well.

2. The second box, in the upper right corner, displays twelfth grade enrollment, the number tested in the twelfth grade by the California Assessment Program (CAP), and the school's membership in a performance group, ranging from A to E, for the last two years. The performance group assignment is based on a measure of parent education, with E group schools representing more highly educated parents than A group schools. This box appears on the second page, as well.

3. Percents of students are displayed who reported on a CAP survey that they took more than three years of math, four years of English, three years of science, four years of social sciences, three years of foreign languages or one year of fine art. Percents of students taking physics, chemistry, and advanced math courses are reported from the California Basic Education Data Systems (CBEDS) survey. The percent of enrollments satisfying the University of California A-F requirements and the related percentile rank are shown.

4. California Assessment Program scores for reading and math are contained in this box, including percent correct scores and percents of students scoring in the top one-fourth statewide (above Q3), in the top one-half (above Q2), in the top three-fourths (above Q1).

5. Scholastic Aptitude Test (SAT) score and Advanced Placement Test scores are presented in the fifth box. The SAT quality indicators include the verbal and mathematics test scores, the percent of students scoring above 450 on the verbal test, the percent scoring above 500 on the mathematics test and performance on the achievement tests, including the Test of Standard Written English, English Composition, Math Level 1, Math Level 2, and American History. Other school information (not quality indicators) displayed here includes the percent scoring above 500 or 600 on the verbal test and above 550 or 600 on the mathematics test, along with the number and percent of seniors taking the SAT. The number of students contributing to each of these school averages is shown, along with percentile ranks for the quality indicators.

The number of students scoring three or better on Advanced Placement examinations was obtained from the College Board. The percent of seniors with these "passing" scores is displayed.

6. The school attendance rate, computed from CBEDS as the percent of students present on October 17, 1985 is shown.

7. Students were classified with regard to English language fluency (limited versus fluent or native) and with regard to mobility (moved into the district in the tenth grade or later). The percents of students in these groups, and their reading and math CAP achievement scores are presented. These data are considered to be additional school information and not quality indicators.

8. The numbers of students attending either California State University or the University of California and their grade point averages were obtained. A "difference" grade point average was computed which represents a comparison of the students from this particular school with all California students. These data are considered to be additional school information and not quality indicators.

9. Counts and percents of students from various ethnic groups are displayed by grade level.

10. Numbers of students from different ethnic groups who are enrolled in physics, chemistry or advanced mathematics courses are displayed. Rates are computed as follows:

a) The numerator is the number of students from a given ethnic group in a given course multiplied by 100.

b) The denominator for physics and chemistry is the number of students from a given ethnic group in grade 12.

c) The denominator for advanced math is the number of students from a given ethnic group in grades 11 and 12.

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2

1984-85 GRADE 12 ENROLLMENT: 310
1984-85 GRADE 12 TESTED: 299
1984-85 PERFORMANCE GROUP: D
1983-84 PERFORMANCE GROUP: D

3

COURSE ENROLLMENT, 1984-85

COURSE	PERCENT	CHG. FROM 1983-84	PERCENTILE IN GROUP
3+ YRS MATH	75.7	7.8	75
ADVANCED MATH	33.7	6.1	66
4+ YRS ENGLISH	90.0	9.7	78
3+ YRS SCIENCE	38.7	-1.5	76
CHEMISTRY	47.7	6.4	89
PHYSICS	13.5	-2.2	69
4+ YRS SOCIAL SCIENCES	22.9	8.2	37
3+ YRS FOREIGN LANGUAGES	41.0	7.7	98
1+ YR FINE ARTS	54.2	-7.3	18
PERCENT IN A-F COURSES	35.9	NOT APP.	30

4

CALIFORNIA ASSESSMENT PROGRAM, 1984-85

SUBJECT	PERCENT	CHG. FROM 1983-84	PERCENTILE IN GROUP
READING SKILLS			
PERCENT CORRECT	63.3	0.6	35
PERCENT SCORING ABOVE Q3	26%	-2	40
PERCENT SCORING ABOVE Q2	52%	-1	35
PERCENT SCORING ABOVE Q1	79%	0	49
MATHEMATICS SKILLS			
PERCENT CORRECT	70.2	1.1	63
PERCENT SCORING ABOVE Q3	30%	2	73
PERCENT SCORING ABOVE Q2	52%	0	69
PERCENT SCORING ABOVE Q1	81%	2	61

5

PERFORMANCE OF COLLEGE BOUND STUDENTS

SCHOLASTIC APTITUDE TEST	NO. OF TESTS	1983-84 RESULTS	PERCENTILE IN GROUP
SENIORS TESTED	151	49.5%	NOT APP.
VERBAL SKILLS			
AVERAGE TEST SCORE	151	418	33
TESTS WITH SCORE>=450	56	18.4%	88
TESTS WITH SCORE>=500*		11.8%	NOT AVAIL.
TESTS WITH SCORE>=600*	6	2.0%	NOT AVAIL.
MATHEMATICS SKILLS			
AVERAGE TEST SCORE	151	484	50
TESTS WITH SCORE>=500	68	22.3%	95
TESTS WITH SCORE>=550*	39	12.8%	NOT AVAIL.
TESTS WITH SCORE>=600*	24	7.9%	NOT AVAIL.
ACHIEVEMENT TESTS			
AVERAGE STD. WRITTEN ENGLISH	151	41.9	29
AVERAGE ENGLISH COMPOSITION	50	482	34
AVERAGE MATH LEVEL 1	49	541	69
AVERAGE MATH LEVEL 2	6	660	68
AVERAGE AMERICAN HISTORY	20	459	18
ADVANCED PLACEMENT TEST			
TESTS WITH SCORE OF 3/BETTER	16	5.2%	57

6

ATTENDANCE RATE (PERCENT)	100.0	NOT APP.	88

7

LANGUAGE PROFICIENCY AND MOBILITY ON TEST SCORES, 1984-85*

LANGUAGE PROFICIENCY AND MOBILITY	PERCENT OF STUDENTS	PERCENT CORRECT FOR: READING	MATHEMATICS
LANGUAGE, ALL	100.0	63.3	70.2
LIMITED ENGLISH	5.0	38.1	61.4
FLUENT ENGLISH & ENGLISH ONLY	95.0	64.8	70.8
MOBILITY (GRADES 10-12)	17.0	63.4	73.7

8

COLLEGE PERFORMANCE, 1982-83*

FRESHMAN PERFORMANCE	NO. OF STUDENTS	AVG. GPA	DIFF. OF GPA
FRESHMAN GRADE POINT AVERAGE (GPA):			
AT UNIVERSITY OF CALIFORNIA (UC)	26	2.92	0.03
AT CALIFORNIA STATE UNIVERSITY (CSU)	30	2.68	0.17

* ITEM IS FOR THE PURPOSE OF PROVIDING ADDITIONAL INFORMATION FOR THE SCHOOL AND IS NOT USED AS A QUALITY INDICATOR.

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1984-85 GRADE 12 ENROLLMENT: 310
1984-85 GRADE 12 TESTED: 299
1984-85 PERFORMANCE GROUP: 0
1983-84 PERFORMANCE GROUP: 0

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ETHNIC DISTRIBUTION BY GRADE LEVEL, 1984-85*

ETHNIC GROUP	GRADE 12 NUMBER	GRADE 12 PERCENT	GRADE 11 NUMBER	GRADE 11 PERCENT	GRADE 10 NUMBER	GRADE 10 PERCENT	GRADE 9 NUMBER	GRADE 9 PERCENT	SCHOOL NUMBER	SCHOOL PERCENT
WHITE	209	67.4	229	71.8	289	73.9	322	71.2	1,049	71.3
BLACK	11	3.5	8	2.5	6	1.5	11	2.4	36	2.4
HISPANIC	22	7.1	21	6.6	24	6.1	41	9.1	108	7.3
ASIAN/FILIPINO	68	21.9	59	18.4	69	17.7	77	17.0	273	18.5
AMERICAN INDIAN	0	0.0	2	0.6	3	0.8	1	0.2	6	0.4
ALL STUDENTS	310	100.0	319	100.0	391	100.0	452	100.0	1,472	100.0

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ENROLLMENT RATES OF ETHNIC GROUPS IN SELECTED COURSES FOR GRADE 12, 1984-85*

ETHNIC GROUP	PHYSICS NUMBER	PHYSICS RATE**	CHEMISTRY NUMBER	CHEMISTRY RATE**	ADVANCED MATHEMATICS NUMBER	ADVANCED MATHEMATICS RATE***
WHITE	23	11.0	106	50.7	70	16.0
BLACK	2	18.2	1	9.1	3	15.8
HISPANIC	0	0.0	5	22.7	7	16.3
ASIAN/FILIPINO	17	25.0	36	52.9	43	33.9
AMERICAN INDIAN	0	.	0	.	0	0.0
ALL STUDENTS	42	13.5	148	47.7	123	19.6

* ITEM IS FOR THE PURPOSE OF PROVIDING ADDITIONAL INFORMATION FOR THE SCHOOL AND IS NOT USED AS A QUALITY INDICATOR.

** PHYSICS AND CHEMISTRY RATES ARE BASED ON PER 100 SENIORS ENROLLED.

*** ADVANCED MATHEMATICS RATE IS BASED ON PER 100 JUNIORS AND SENIORS ENROLLED.

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Quality Indicator	STATEWIDE AVERAGE		STATEWIDE TARGETS		
	1983-84	1984-85	1985-86	1987-88	1989-90
A. Course Enrollments					
1. Mathematics					
3 or more years	67 %	74 %	70 %	73 %	75 %
Advanced Mathematics (per 100 juniors and seniors enrolled)	28	32	32	36	40
2. English					
4 or more years	73 %	86 %	75 %	78 %	80 %
3. Science					
3 or more years	33 %	36 %	38 %	42 %	50 %
Chemistry (per 100 seniors in school)	25	31	27	32	40
Physics (per 100 seniors in school)	10	12	16	21	25
4. History/Social Science					
4 or more years	33 %	37 %	38 %	42 %	50 %
5. Foreign Language					
3 or more years	22 %	22 %	25 %	29 %	32 %
6. Fine Arts					
1 or more years	65 %	67 %	66 %	68 %	70 %
7. Enrollment in a-f courses					
Percentage of school enrollments in a-f courses	*	38 %	40 %	45 %	50 %
Percentage of graduates completing a-f requirements	← TO BE ANNOUNCED (Spring 1986) →				
8. Units required for graduation	← TO BE ANNOUNCED (Spring 1986) →				
9. State Board Model Graduation Standards	← TO BE ANNOUNCED (Spring 1986) →				
Percentage of graduates meeting standards					

* Data first collected in 1984-85

QUALITY INDICATORS AND STATEWIDE TARGETS FOR CALIFORNIA HIGH SCHOOLS

Quality Indicator	STATEWIDE AVERAGE		STATEWIDE TARGETS*		
	1983-84	1984-85	1985-86	1987-88	1989-90
B. California Assessment Program (CAP) Scores					
1. Reading					
Percent correct score	62.2	62.9	62.7	63.7	64.7
Percent scoring					
above Q_3	25 %	27 %	26 %	27 %	28 %
above Q_2	50 %	52 %	52 %	56 %	60 %
above Q_1	75 %	77 %	76 %	78 %	80 %
2. Mathematics					
Percent correct score	67.4	68.3	67.9	68.9	69.8
Percent scoring					
above Q_3	25 %	29 %	26 %	27 %	28 %
above Q_2	50 %	48 %	52 %	56 %	60 %
above Q_1	75 %	77 %	76 %	78 %	80 %

* Targets are compared to 1983-84 standards.

Quality Indicator	STATEWIDE AVERAGE		STATEWIDE TARGETS**		
	1983-84	1984-85	1985-86	1987-88	1989-90
C. Dropout/Attendance					
1. Dropout rate (statewide averages and targets are attrition rates, grade 9 to graduation)	29.3 %	29.0 %	28.3 %	26.0 %	23.5 %
2. Attendance rate – percent of students in attendance on a specified day	**	93.7 %	94.0 %	94.5 %	95.0 %

** Data first collected in 1984-85

Quality Indicator	STATEWIDE AVERAGE	STATEWIDE TARGETS		
	1983-84	1985-86	1987-88	1989-90
D. Performance of College-Bound Students				
1. Scholastic Aptitude Test (SAT)				
Percent seniors taking	39.0 %	*	*	*
Verbal	421			
Average score		428	436	444
Percent of seniors scoring at least 450	15.5 %	17.5 %	21.0 %	25.0 %
Mathematics	476			
Average score		481	489	496
Percent of seniors scoring at least 500	16.5 %	17.8 %	19.1 %	20.5 %
2. Achievement Tests				
Test of Standard Written English	42.6	43.0	43.5	44.0
English Composition	492	503	514	525
Mathematics Level 1	517	528	539	550
Mathematics Level 2	647	656	665	675
American History	501	509	517	525
3. Advanced Placement (AP)				
Number of scores 3 or better (per 100 seniors in school)	9.5	12.0	15.0	18.0

NOTE: All data on this page are for 1983-84 school year; 1984-85 results are not yet available.

* Percent of takers for information only, no statewide targets have been established

Developing State, District
and School Objectives From School Profiles

Francis Hatanaka
Hawaii Department of Education

Topic: Accounting to the Devil, Fanny Fairbanks, and the Public

Good afternoon. One of the hardy perennials of American education is the pursuit of accountability--what it is, how it can be attained, and what it means, or might mean, to boards of education and to school superintendents.

Even though accountability has been around awhile, I'm always overcomed with the queasy feeling when talking about it becasue that's a word bedeviled by the lack of clear definition. Without a definition, my talk this afternoon will be like horns on a steer--a point here, a point there, and a lot of bull in between.

So, let me "start at the bery beginning"; let me start with not one but three definitions of accountability. The first two are offered in jest, but the third definition is the one that I would like to amplify.

The first definition of accountability is, or was, personified by Farley Fairbanks who died and went to the nether region. There Farley reported to the head devil to account for his doings here on earth. The head devil listened intently and when Farley was through with the accounting of all his actions, the head devil told Farley he could have his pick of three rooms in which to spend eternity. The devil opened the door to the first room, and in the room were thousands of men standing on their heads on a solid brick floor. Farley told the devil he did not want to spend eternity doing that. So the devil opened the door to the second room, and in the room were thousands of men standing on their heads on a wooded floor. Although Farley thought that standing on his head on a wooden floor was better than a brick floor, he still wanted to see the third room. The devil opened the third door, and in the room were thousands of men standing up to their ankles in a cesspool of foul substance. The men were talking and laughing while drinking coffee and munching on sweets.

"That stuff they're standing in is horrible," Fairbanks thought, "but I prefer this room to the other two." So he walked into the room and the head devil slammed the door shut. A few minutes later, the assistant devil could be heard hollering: "Okay, Fairbanks and all you guys, coffee break is over. Go back to standing on your heads!"

There is a second definition, of a sort, of accountability, which our friend Farley Fairbanks also personified while he was living.

After an argument with his wife Fanny, Farley stalks out of the house telling her that he would be going for a walk. Instead he hurries to the nearest disco, meets a gorgeous lady, and spends the entire evening drinking, talking, and dancing with here. Soon it's 2:00 a.m. and closing time. Before leaving, he asks the lady for a favor. He asks her to reach into her handbag, pull out her cosmetic case, and sprinkle both his hands with powder. Though puzzled, the lady nonetheless obliges and liberally dusts both his hands with powder. He thanks her then rushes home. Fanny is livid when Farley enters the living room. She wants Farley to account for his whereabouts. She

screams: "Where've you been? Do you know what time it is? What's the matter with you?" Farley pauses then calmly answers: "I went to the disco, met this gorgeous gal, and we drank, talked and danced till closing time." Fanny retorts: "You're lying!" Farley replies: "No, I'm not lying. That's the truth." Fanny, still upset, yells: "Then show me your hands!" After carefully examining Farley's powdered hands, Fanny says: "Disco, dancing, drinking, gorgeous lady--all lies! You went bowling with the boys again!"

So much for the escapades of our roguish friend, Farley, and the accounting he had to do to the head devil and to Fanny.

The accountability that I would like to discuss at some length is linked to a purpose of a different sort that is sweeping across all of public education. This purpose, which is at once old and new, affirms the importance of public education and of making excellence its hallmark. But unlike those that came before it, this purpose also affirms the need to demonstrate excellence in tangible ways.

Excellence translates into better performance by our students in reading, writing, speaking, analyzing, computing, and problem-solving. It further translates into broader and deeper understanding of the physical, social, political, and ethical worlds, and of the need to develop character and to behave responsibly. It is, beyond dispute, a search for a higher standard of conduct, a higher order of thinking skills, and a higher level of personal achievement that our students can carry with them through life.

But along with achieving excellence, we need to judge our successes and to report on them. We must do more than simply say that we need to make changes, or that we are working on those changes. Significant improvements may take time, but we still need to demonstrate and report on our short-term successes.

To that end, I have put in place this fall INDICATORS OF EXCELLENCE for the Hawaii's public school system, which is how I've operationally defined accountability.

INDICATORS OF EXCELLENCE serves two purposes. The first is to set goals for the state, districts, and individual schools; and the second is to report on the progress that was made to reach those goals.

As a concept, education indicators gained much of its prominence during the accountability movement of the 1970s to keep citizens informed about education's results, progress, and expenditures. At the forefront of this movement were governors, state legislators and school board members, each imploring educators to back their claims of successes with accurate and timely data. But the data that followed were sparse, incomplete and sometimes unconvincing.

Dissatisfaction with education's responses led to a flurry of initiatives.

One, in January 1984, the U.S. Secretary of Education released his first Wall Chart of education statistics comparing the 50 states and the District of Columbia on a number of education variables. A second Wall Chart followed in December 1984.

Two, the policy committee of the National Assessment of Educational Progress announced a new policy under which states may volunteer to administer standardized versions of National Assessment of Educational Progress tests.

And three, at their annual meeting in November 1984, the Council of Chief State School Officers adopted a policy calling for accurate and timely data on schools and for making appropriate and valid comparisons of those data.

The signs all point to an enormous surge in public interest in receiving quality data on education.

But more than that, interest is growing on those aspects of education that need to be measured, on the specific indicators and ways in which they are to be reported, and on ways to use those indicators to improve teaching and learning in the classroom.

For the Hawaii public schools, INDICATORS OF EXCELLENCE describes significant aspects of our school system, such that inferences can be made about its effectiveness. A high level of usefulness of an indicator is reached when the school principal can inquire into the effectiveness of instructional programs and services. The same high level of usefulness and use of an indicator is also reached at the district and state when the data can set off different kinds of inquiries into crafting effective schooling practices and later evaluating them.

Our indicators are of two kinds--outcomes and school climate. Outcomes are the most informative indicator of the quality of education, and the primary outcome measure is student achievement, as measured by standardized tests. But grade promotion rates and grade-point averages are also used to describe quality. School climate is the setting in which education takes place, and among the factors that make up the climate of a school are perceptions of students, staff, school administrators and parents about the school.

In all, we have nine indicators of learning outcomes. I'll focus on a few. One indicator is the percent of students who are promoted at the year's end. For this school year, we've set state goals of 99.5 percent for grade 2, 99.6 percent for grade 6, 98.4 percent for grade 8, and 95 percent for grade 10. Numerical goals were also set for SY 1990-91. In addition, each district and each school have set their own short- and long-term goals.

A second indicator of learning outcome is the College Board SAT scores. For this school year, the goal is a combined verbal and math average of 853, which is several points higher than what was obtained last year. The goal for SY 1990-91 is 893, which will bring us in line with President Reagan's goal of each state matching or exceeding its 1972 College Board SAT average.

We are, of course, setting SAT goals only for the public schools. Private school seniors, whose averages are often rolled into the state's average, were removed from our computations.

Several things can be said about our College Board SAT scores from last year.

Though Hawaii's SAT score improved this year by a total of eight points--six on the verbal section and two on the math section--only a small portion of this increase can be attached to the public schools. The public school score increased by a mere two points compared to the 18-point increase registered by private schools.

Even so, our 2-point increase, while hardly comforting, did snap a 20-year slide in SAT scores and possibly marked a watershed in that dismal history of tumbling scores.

The 1985 public school results signal two things. the first is we will fall short of this year's numerical goal for 853 for the SAT. Obviously, the shart and steady gains that we had hoped for will have to wait awhile.

The other message pertains to priorities for boosting our SAT scores. The first of those priorities is to raise the verbal scores, which trail our math scores by nearly 85 points, of all our test-taking seniors; the second is to lift the scores of seniors who as sophomores scored in the average and below-average stanines on our statewide achievement test.

Simply put, unless we see a drastic rise in verbal scores of all our seniors, in particular, higher verbal and math scores from low- and average-achieving seniors, Hawaii's public school SAT scores will stand still.

One of the nice features of setting numerical goals is that it fosters different ways of looking at old problems and of floating new solutions. The problem of low SAT scores has been with us for a long time, but it was only after goals were set to raise those scores by a fixed amount that those initiatives arose. Here are some of our solutions that might be of interest to you.

The first is to have our high school counselors analyze SAT scores of their past seniors in order to pinpoint courses that are associated with high SAT scores.

The second is to have our high school counselors investigate the relationship of high SAT scores to participation in literary, forensic, and other similar activities that stress organization of ideas, logic, vocabulary building, spelling, and correct grammar.

If such relationships exist, our high schools will steer juniors and seniors with college plans into those courses and co-curricular activities. The College Board just issued a report giving credence to the relationship between participation in a few well-chosen co-curricular activities and later success in college.

Still another action is to make our college-bound juniors and seniors SAT-wise: arm all of them with an assortment of test-taking skills and experiences so that they can perform efficiently and with confidence on the SAT.

In that regard, we are putting the finishing touches to the idea of using Chapter 1 funds to enroll all of our Chapter 1-eligible juniors and seniors with college plans into one or more PSAT- and SAT-prep programs. In addition, we are about to launch a statewide effort using state funds to enroll juniors and seniors in those prep programs--especially juniors and seniors in high schools that have historically performed poorly on the SAT. We would either hire our own teachers to conduct those programs during non-school hours or work with private firms to conduct those programs for us.

A longer-term idea that we are working on is to require high school English teachers to assign a minimum number of writing assignments, say one per week, with the assignments to be corrected and returned to students within a specified period of time. Schools would be permitted to hire lay readers to correct and grade appropriate parts of the assignments.

By using the College Board SAT to set academic achievement goals, the golas became powerful motivators to do things differently. They set off some new and unexpectedly high levels of positive actions to have our school system equal and even exceed those goals.

The notion behind this goal-setting activity is that the more often our high schools are held accountable for the performance of their test-taking juniors and seniors, the greater will be their effort to improving the scores. According to the research, setting high goals and communicating those goals to the entire school are elements common to effective schools.

Here is another example of how achievement golas triggered inquiries that otherwise would have remained dormant or would have been remanded to the backburners of our system. A goal is to increase the percent of pupils who score in the average and above-average stanines in reading and in mathematics on our statewide achievement test, the Stanford Achievement Test. This means that there would be a corresponding decrease in the percent of pupils scoring in the below-average stanines on the Stanford. None of our schools missed the sign, especially the Chapter 1 schools. For Chapter 1 schools to meet their school goals, they need to move students out of the below average stanines--students in the 1st or 23rd percentiles on the publishers norm--into the higher stanines.

Then the goals ignited a spat of questions--questions that probably should've been asked a very long time ago. They asked: How is it that with all of the impressive NCE gains that the Chapter 1 schools report each year, those gains don't show up on our statewide Stanford Achievement Test? Is it because the tests that our schools use to measure learning gains and to later report on those gains in NCE units are out of kilter with our Stanford? Or is it because the amount of NCE gains are trivial, thus they contribute little to the gains we have sought on the Stanford? Or the <u>policy</u> question: Is this an instance of winning the battles but losing the war?

Here's another question connected with our Chapter 1 schools that left me stunned with pleasure. The question was: How might our principals be assisted to channel their Chapter 1 resources, and the state resources that they supplement, to instructional activities that have high payoffs? Now, that's a key policy question. It is also a key question in evaluating the effectiveness of Chapter 1 funds. Those questions, brought together and answered together, provide the basis to allocate resources in a way that is totally new but exciting to me. With a 20-year supply of project effectiveness and cost analyses data for Chapter w, my instinct tells me that a way to retrieve cost-effectiveness data on a modest scale is within our reach. My instinct also tells me that the search for cause-and-effect data in Chapter 1 is not elusive as it appears--it shouldn't be for projects that have a plentiful supply of data.

We are also using our statewide achievement test to set numerical goals for the elementary, intermediate, and high schools. Moreover, intermediate and high schools have goals calling for increases in the overall grade point averages of their students, and high schools have goals that are referenced to our Hawaii State Test of Essential Competencies--our so-called graduation test. Other indicators around which goals are set are participation rates in co-curricular activities, and adults in our community schools completing their programs or receiving their high school diplomas by way of the GED test.

An area that we have explored at some length and have added to our INDICATORS OF EXCELLENCE is the assessment of school climate. Starting last year, our schools have assessed their school climate using scales that the department developed and tested. School climate is the personality or feeling that comes out of people relating to each other such that morale, respect, caring, cohesiveness and the opportunity to make input all improve.

School climate goals, which are expressed numerically, are our attempt to systematically look at and improve teaching, learning, as well as attain a satisfying school environment.

The basis for implanting school climate into our INDICATORS OF EXCELLENCE was the research on effective schools. The research pointed to mutual respect and trust among students, staff, administrators and parents as one element of an effective schools. Other elements were sharing responsibilities, issuing clear and consistent discipline policies, providing for parent-initiated projects to improve the school, and maintaining adequate facilities and a well-kept school plant.

School climate assessments involve elementary and secondary students, teachers, clerical and other support staff, counselors and other professional support staff, school principals and vice principals, and parents. In all, there are six major groups from whom scores are obtained and later reported with the help of the state's main frame computer and a micro computer scoring system that the department operates.

The assessments made last year of nearly three-fourths of our schools showed expected and unexpected results. They showed that the farther a group is removed from the administration of the school, the less positive are the

perceptions of the school's climate. That is, school administrators view school climate positively, teachers less positively than administrators, and students even less than teachers. But the unexpected results were that secondary students and, to a lesser extent, teachers and parents felt the opportunity to contribute their ideas to improving the schools was conspicuously missing. This pattern was obtained from nearly all of our secondary schools.

That perception, of course, is counterproductive to student self-esteem, and it deprives the school administrator of new and fresh ideas to run an effective school.

From that experience, I am beginning to feel that the perceptions of secondary students are not only harsher than those of the staff and of parents, but also their perceptions are hardest to change. It seems to take more time, resources, and explanations to turn things around for students mainly because students, more than adults, show a striking ambivalence to change.

Measuring perceptions of people and using those perceptions to set goals in order to change behaviors is a new venture for us. Perceptions, after all, are highly sensitive to the value systems of people and of institutions and to events over which our schools have little or no direct control. Indeed, questions are asked about the reliability of our scales and the worth of using the scores to set goals and to do re-assessments to check on progress.

Though the problems just mentioned are found in tests of achievement, they are compounded in school climate assessment scales. But it is my belief that those problems have been controlled sufficiently, and our scales can and should be used to set schools' goals and later report on progress.

That's another nice feature of our accountability system. It does make us take risks that we would not ordinarily take.

Enough said for now on the foundation and the main features of INDICATORS OF EXCELLENCE, our accountability system.

Let me show you next the dark side of the system.

Before I do that, there's a story about the dark side of Lent that I'd like to share with you. One evening, a father told his ten-year-old son that he should give up something for Lent--something that would be a real sacrifice, such as candy. the boy hesitated for a moment and then asked his father whe <u>he</u> gave up.

"I gave up liquor," the father replied. "But, dad, I saw you drinking something before dinner," said the boy.

"Yes," said the father. "That was sherry--I gave up hard liquor." "Well dad," shot back the boy, "I think I'll give up hard candy."

There are principals in our 225 schools who view INDICATORS as a bane to good education. Their objections center on, first, the quality of the data that are in our educational data base--actually the quality of the data that they, the principals, send to the state office; second, the school-to-school comparisons that the board of education, the state legislature, and the general public will make from the year-end results; and third, the difficulty in setting numerical goals.

Consider the first objection, that of the quality of the data base from which numerical goals are to be set and the current year's data are to be added. There are variations from school to school in reporting of data: some schools are more conscientious than other schools in recording, say, pupil absences and suspensions and then reporting them to the state office. The objection among some principals is that those vagaries in reporting data will "harm" the conscientious principal and at the same time distort district and state averages.

My simple and straight forward advice to those principals is to worry less about what other principals are doing or not doing and to worry more about cleaning up their own data reporting systems so that their goals and their school results are solid. The main thrust of INDICATORS is to have our schools measure up to the goals that they have set for themselves; it is not to foster comparisons between schools or between districts.

As for the second objection, that of school-to-school comparisions, those comparisions are apt to happen based on what we've learned from the USDOE Wall Charts. Frankly, I don't know how to totally prevent the public from making unwarranted comparisons, but there are ways to steer the public away from making them by publicizinb the kinds of comparisons that should be made. In that regard, I don't hold much hope for fostering relevant and valid school-to-school comparisons using a whole lot of demographic data. Scanning those background data, such as teacher salaries and socio-economic indexes, will not yield the insights that are needed to make fair comparisons. That's the same problem I've encountered with the Wall Chart. "Population characteristics", such as per capita income, median years of education, and poverty rates, or "resource inputs", such as average teacher salary and per pupil expenditures, don't mean much for making accurate and appropriate comparisons if we continue to squint here and squint there at the data, which is what we're doing.

But more important still, even the demographic data themselves are hard to interpret. In the Wall Chart, for example, Hawaii ranks second nationally in the enrollment of minority students--Hawaii has 75.2% minority students, the nation 26.7%. To interpret that ranking, it seems another set of background data is required, namely the racial makeup of the state's population that the Wall Chart does not provide. Another hard-to interpret ranking in the Wall Chart is our national ranking on average teacher salary. We rank fifth in the nation with $24,319, but that ranking of itself is not enough to mak a judgment of the monetary worth of our teachers. Missing conspicuously is the backgroun data to that background data: Hawaii's cost of living is roughly 20% higher than the national average.

But that's less of a quandary than the one I read about recently. A man dying of thirst in a desert stumbles on to a gas station. He begs for water and is promptly refused. Instead the station owner offers to sell him a dozen neckties for a dollar, which the man dying of thirst spurns. He continues walking till he comes to a mansion with gorgeous waterfalls and several large swimming pools. He rings the doorbell and asks the servant permission for a drink of water from the many water fountains. But he is promptly turned down because he doesn't have a tie to enter the mansion grounds.

Golfer Lee Trevino lamented on his quandary on how his fame is fleeting. This is how he described it. "A woman had me autograph a $5 bill and told me she would treasure it forever. A half-hour later, I bought some drinks with a $20 bill and when the change came back, in it was the $5 I had autographed."

The third objection from some of our principals, that of difficulty in setting numerical goals for achievement, behavior, attendance, and school climate, irks me the most. It irks me because numerical goals are being set daily for a host of educational activities in our school system. There's one for the football season, another for the school fund-raiser to send the band to Pasadena to perform in the Rose Bowl parade, and still another to sign up students for a campus beautification contest among different campus clubs. At the root of ther fears is, I think, a natural aversion for setting goals that may later hurt them if the goals are not met. Unmet goals in academic achievement, student behavior, and school attendance are apt to be more threatening than unmet goals in say, football.

After 30 years, I've learned to spot the danger signals and avoid being taken in. So to assuage their fears, I tell them to set their goals one unit better than what they obtained the year before. If the daily attendance rate was 90% last year, they would set this year's goal at 91%. If suspensions for assaults on campus numbered a hundred last year, this year's goal might be to reduce it by one percent. Actually, they can set numerical goals if they use a variety of techniques that are set forth in the administrator's manual on INDICATORS OF EXCELLENCE. Those techniques are referenced to historical as well as current data on school productivity that the state office annually prepares then sends to every school in the state.

There are at least two other states that have launched goal-setting projects similar to our INDICATORS OF QUALITY.

California has quality indicators for high schools, intermediate schools, and elementary schools.

For high schools, there are five categories of indicators:

1. Enrollment in selected academic courses.

2. sAchievement scores.

3. College entrance exam scores and freshman year grades in the California college system.

4. Dropout and attendance rates.

5. Student participation in extracurricular activities and the amount of homework and writing assignments completed.

Elementary and intermediate have different kinds of indicators. They include number of instructional minutes per day, achievement scores in reading and mathematics, amount of writing and homework completed, attendance, and enrollment in algebra and science.

An interesting feature of California's approach is that schools are grouped into five different socio-economic categories for making and then reporting comparisons among the schools.

Kentucky draws on three types of indicators--output, input, and process.

Output indicators include vocational education placement rates, college entrants, dropouts, retention rates, and standardized testing results from statewide tests given in grades 3, 5, 7, and 10.

Input indicators include assessed valuation per pupil, local financial support, total enrollment, and the percent of economically deprived and minority students.

Process indicators include salaries and rank of teachers, instructional cost per pupil, professional/nonprofessional staff ratio, central office/school professional staff ratio, and minority staff ratio.

The interesting feature of Kentucky's approach is a statistical model to explain variations in outputs by factoring in various input and process variables.

To sum up, accountability is not only compatible with promoting excellence in our schools, it is essential to the survival of our public schools. Accountability in public education inevitably comes down to a willingness to set goals, assess achievements, report on progress, and allocate scare resources on the most rational way of which we are capable. That's the thrust of our INDICATORS OF EXCELLENCE. One of the interesting paradoxes of INDICATORS was that in making some of our present ways of doing things obsolete, we revitalized still older methods. Reinventing the wheel is a phrase applied scornfully to rediscovering the obvious--and there is much cogency to that belief. But when the obvious is half forgotten, it is well worth reinventing even though it's sometimes like trying to sew a button on a custard pie.

State Activities In Developing School Profiles, Data Bases and Indicators

Harvey Crommet
Alaska Department of Education

I'd like to talk about two elements of what we have been doing in the Deptartment of Education in Alaska in terms of our data needs. First, I'll talk about what we are doing to get the information necessary for planning, for federal reports, and for other things that we have to do, and then give you a brief overview of a data framework for school profiling that we are doing.

A year ago the Commissioner asked me if I would chair a group of people to survey the Department to see what data we actually did have, where it was coming from, who needs it, and other things you have to do to set up a data based management system. I was very lucky in getting a group of five people from different sections of the Department. We decided we would do a survey of the program managers and users of the data in the Department to see what data they needed, where they got the data, where the data came from, what uses they made out of these data--and then try to come up with a plan for the organization. In the process of doing this we found, as everyone else knows, that the same data were collected by many different sections of the Department, but without interaction among these sections. We realized we had been forcing the school districts to present the same information several different times. So one of our key elements was to set up our data base so that we could cross-reference it to any application and only have to collect the data once. If information were collected under the migrant program, for example, then it didn't have to reappear under one of the special education programs, and so forth.

We also wanted to come up with a software package that would do what we wanted it to do. We looked at many different systems. We have the WANG VS100 system in our Department, which is a pretty powerful, high-capacity computer, and we found that WANG had just released a new data base management system called PACE. I went to take a look at it where it was in operation, then we brought in some people from WANG. They gave us some training, and we decided that the system would do what we wanted it to do. First of all, it was quite easy for a program manager to be trained to be able to manipulate the data in the base once it is put up. If they had special applications that they wanted to write themselves, they could do it; they didn't have to be programmers because it was a system that generated the program code for you after you had set up the perimeters. So we brought the system in during the summer. It is now in operation, we have about six good applications on it already, and I think it is going to be a real help.

We started by going around to the different sections. I will describe what we did with one section to explain the procedure that we used. We went to our Chapter 1 coordinator and asked "what are the sources of the data that you need?" The coordinator showed us the application that goes out to the schools, the evaluation instrument, the achievement forms that they use, the state performance report, the monitoring document that we use, etc. Using all of these instruments, we made a data dictionary and defined each of those data elements--where they came from, how they were selected. We put this all together, took it back and went over it with the coordinator, who then pointed out any inaccurate items.

After about three of these go-arounds, the coordinator said "yes," I think you have a pretty good handle with what we need and what reports will have to come out of it, and so forth.

During this process we designed our series of data bases: One is basically a student data base that we have to have, another is concerned with the financial side of it, the third gets into the evaluation, and so forth. By tying all of these together with key elements, we are now able to go into it and ask questions without any trouble; we can also generate our federal forms out of it just by asking the right questions. It has an excellent query section on the program. We are in the process now of doing our statewide audit form that each district has to submit to us, and we are in the process of putting that one into the system. That will be our second application. The third application will be Chapter 2. Special education is a little farther down the line, but that will be coming up sometime next year.

We think the system is going to work for us quite well. Of course, it requires a lot of time and effort; nobody works on it full-time. We all have two or three other jobs, so that we sandwich it in between these. Since the Commissioner of Education has a real interest in the system, we find that when we need a week or two weeks of concentrated work to do a certain part of it, he makes sure we get relieved from our other duties so we can work on it. So, the project is coming along. We are about three months behind our timeline, which I don't think is too bad. I am looking forward to having at least three applications up and running by the end of the school year.

The second aspect of our current work is a framework for school profiling. One of the things that we really wanted to do was to be able to review our information about a given school before we ever went out to do our monitoring. However, in attempting to do this, we found that we had pieces of it all over the Department, pieces which were never brought together. So we contracted with Interwest and they developed a framework for school profiling for us. They have put it on the Apple computer, so that we are now able to have the schools generate a lot of the data coming directly back from them. Every school in Alaska has a lot of Apple computers, so we used it because it is so common; schools can just send us a disc. We are consolidating the information and are looking forward to putting the profiling system into operation sometime during the next school year.

Alaska has only 53 school districts, which is not a great number. We have just over 100,000 students in the entire state, so we are talking about a relatively small data base. The only problem is that our school system is spread out over so many thousands of square miles that it is hard to transmit data. We do have a satelite system, so that now we have telephone communications to all of the villages, and are beginning to transmit a little bit of data that way. We have the electronic mail system that is online, so we can finally transmit electronic mail to any school district in the state. Basically though, we are still using the mail, sending things in, and doing the keying of it at this time. We are discussing with some of the bigger school districts, such as Juneau, Anchorage, Fairbanks and Kenai and the Mat Su Valley, the possibility of transferring data magnetic tape. Most of those districts have IBM systems, and we can read the tapes with our WANG if we set them up in the right protocol. So, we are in the process of doing some of the electronic transfer.

That is where we are. Where we want to go is to develop a system that would enable us to answer the ad hoc questions that come in from legislatures, the governor, and the school districts about what is happening in education in the state. Right now, it is almost impossible to do it. If we do get a request, we have to go in and do the handcount, going through 100 different files to find it. Since that ties up people and lots of time, we hope we can get around it.

One way that this meeting and meetings like this are going to be valuable to us is to give us all a sense of what other people are doing with data collection and management. I wish that we could all share our data elements and definitions, so that we could really look at comparable types of things across the states. At the present time, we don't even have it well enough defined in the states to be sure that the count from one school district is the same as it is for another school district, but we are getting there.

State Activities in Developing School Profiles,
Data Bases and Indicators

Ichiro Fukumoto
Hawaii Department of Education

I have set two goals for myself this afternoon. The first is to talk about our data profile, which is now being passed out (see the attachment to this presentation). The second goal is to stop talking before you stop listening, so I have set my clock for 20 minutes and it won't go beyond that, I promise.

Our data base is designed to serve a mix of intended and unintended purposes. Let me talk first about the intended purposes of that profile that was just passed out to you. The first, I think, is to serve, for the school principal, some of the reporting requirements that come with school accreditation. In fact, all our our high schools and nearly all of our intermediate schools are now undergoing accreditation through the Western Association of Schools and Colleges. One of the requirements is to provide historical data on the school to assist the review team to do its analysis and to come up with program improvement recommendations for the school. So the data base has been used by principals who need to call up information to complete the report that is required by the accreditation review team.

The second purpose is to build up an awareness within the community about the school and about schooling in general. School principals will use that data base to talk to their own constituencies about what the school can offer and what it has offered in the past. One particular target group would be parents new to the school or community and students that are new to the school. It is a kind of orientation tour. Rather than to go through reams and reams of documents, what school principals do generally is to pull out whatever information they need from the data profile, and then project information onto transparencies for viewing by a fairly wide audience.

The third and probably the most important reason to have the data base is to help principals make decisions about the school--program improvement, curriculum improvement decisions, decisions about how to allocate resources. What they do here is to look at past trends--trends in achievement, attendance, behavior of kids, school climate. Pulling all of these data together, they can make informed decisions--to fund certain programs or not fund certain programs or projects, cut back on others, expand on others, or even terminate some of the programs and services.

As for the unintended uses, one is the goal setting activity that the superintendent talked about over lunch today. Principals would look for a trend or historical pattern of achievement, behavior and so on, and armed with that information, they would project their short- and long-term goals for the school. So while that may be of a fairly good purpose here, some of the principals feel that is just not how data bases

should be used. They question, as the superintendent pointed out, the quality of the data in that school data base. But again, you have to remember what we have done at the state level is simply to collect aggregate information that, for the most part was reported to us by the schools. What we have done is to reorganize the data and report that information back to the schools. So we don't really give too much credence to those kinds of concerns or comments.

The other unintended purpose is a kind of brokerage purpose that has descended upon people in the district and state offices. This function is fairly new to the state office, and it goes something like this: we have parents who are new to Hawaii and, like all new parents, they shop around for schools. They call us and say, "Tell us what the achievement pattern has been for school A and compare it with achievement patterns for schools B, C, and D, because those are the four schools that I have in mind for my youngster to attend." Now, I would say that is a fairly new function, because we have never done this in the institutional sense. We have generally referred those parents to the principal of a home school or the school that the youngster probably would be attending based upon the place or community that that parent would like to settle in. Based upon the parents' interview with the principal, they would make the decision about whether to send the youngster to the school or to move into community A versus community B, C, or D. Principals with schools that have had a fairly long history of low test scores, poor attendance, and a high incidence of all kinds of behavior problems resist this whole effort. They feel that this is not the way to use the data profile. They would prefer, instead, to have those parents come in to talk to them and to tell the parents what is beyond the data base, what the numbers don't show. And I have some ambivalent feelings about this. I think the principals have a good point there. On the other hand, for us to not furnish the data parents want is a serious problem. If you don't furnish them the information, one consequence is that those youngsters wind up in private schools. They don't come to public schools. We have something like 18 percent of school-age youngsters attending private schools in Hawaii. I think this is one of the highest percentages in the nation.

I will go through the data base itself in the next ten minutes. On the table of contents you find what would be contained in a typical school data base. On the left column it starts with student achievement and goes all the way down to school crime data. These are the four kinds of quality indicators we have for the school: data on achievement, attendance, behavior, and school climate. On the back of the same sheet, you have data on the school's context--student demographics, teacher demographics, and some data on the U.S. census by school attendance areas. I will touch on this for a few minutes later on.

On pages A-1 and A-2 are graphs displaying scores from the Stanford Achievement Tests administered statewide from grades 2, 4, 6, 8 and 10, in reading and math. In addition, we have a profile for reading and math by ethnicity (A-3). We show the results on the Stanford Achievement Test by each of the 12 ethnic categories that we have in our student data base. We have a profile for competency-based measures there for the third grade and for academic efficiency, as it is exhibited by a high retention or promotion rate.

A-4--Students of limited proficiency. We have an indicator there. It is called an exit rate. About 8 percent of all youngsters are in that program. We are finding that they are getting fairly comfortable staying in that program. They are like long-term tenants, I suppose, and our goal is to get them out of the program. We thought a way to do that would be to set some numerical goals to step up the percentage of kids who exit the program each year. Grade point averages are provided for intermediate and high schools; lower than 2.0 is equivalent to lower than a D average (A-4), 3.0 is B average or higher (A-5). Seniors graduating with 20 (A-6) credits would be the minimum number of credits for graduation from a four-year high school. We are finding that about 80 percent of our kids do exceed that 20-credit requirement.

And, of course, we have the opposite end of the continuum. We have seniors not graduating (A-7) for one of two reasons: One--failing to pass all HSTEC, the acronym for Hawaii State Test of Essential Competencies, which is like a miminum competency test or a graduation test. Also, we have a failure rate for seniors by the number of credits and courses that they have failed to meet or to take.

On attendance, Category B, we have some data on the movement or the mobility of youngsters. District Exceptions (B-2) would be exceptions for which permission is granted by the school system to allow youngsters living in school district A to attend a school in school district B. We are saying that they can legally cross these school attendance lines. This has to be done through a formal process, and the usual reason is to take a course that is not offered in school A, to move over into school district B to take a course that is offered there instead. Or another reason is childcare. If I work in town and live on the windward side of the island, I may need to get my child enrolled in the school in town.

The average daily attendance or absence rate (B-3), that is a conventional indicator which tells you the percent of kids that was absent in any given day.

Page C-1 concerns suspensions. We are trying to reduce the incidence of suspensions for crisis offenses and regular offenses. Crisis offenses are the ones that are so severe that we can, without consent from or consultation with parents, without even notifying parents, suspend the youngsters--take them out of the school for their own safety or for the safety of others. The regular suspension, of course, would occur for a whole assortment of school-related offenses. The offenses A, B, and C (page C-2), this is something created by the Board of Education. It is a table of offenses and remedies, I suppose. Offense A would be the most serious kinds of offenses--felonies in the law books. Examples would be assault or property damage, offenses which call for mandatory police action. Some form of police notification has to follow such offenses. Offense B refers to in-school offenses such as disorderly conduct or theft--even those two would require police reporting. Offense C refers to all kinds of more minor offenses that kids commit in school--smoking, swearing, cutting class, being insubordinate, and so on. That would represent the majority of offenses about which that schools would have to report and be accountable.

Category D is school climate. As the superintendent pointed out, we have gone into this area for the first time during last year. We are having schools report on factors connected with the overall climate of the school. In addition to climate, we are talking about the quality of the program, the processes and, of course, the adequacy of materials in the school (See D-1). That is done for all of the schools, and pupils, staff, parents, school administrators all get into the act.

Category E give some information about student demographics. This is the contexual data that we send to the schools on a routine basis. We provide ethnicity information, as does California. We also provide information on the number and percent of kids in the school whose parents work or live on federal installations, the percent of youngsters on public assistance, the percent of kids who participate in free and reduced lunch programs, the special education and the students of limited English proficiency, and pupils who are now in those two programs.

We also provide information on teacher demographics--ethnicity, experience, age and absences. I think principals find that information useful, because it signals certain kinds of moves and administrative decisions that need to be made about teaching staffs, such as those involving retirement. Knowing which teachers would be retiring, when and what their subject areas are, enables the principals to make long-term plans to replace these teachers.

Refer to Category G, U.S. Census Data. We sent a fellow up to Washington, D.C., for four days to the Bureau of Census and one to New Jersey to the gambling casinos, to work out a system wherein we could match our school attendance areas with the U.S. Census track data. We are trying to define school attendance areas and align those with what might be shown on the U.S. Census maps. Based on that kind of matching, the U.S. Census Bureau was able to furnish us data about our school attendance areas, and we have several kinds of data. For example, we have data on the high school graduates among persons 20 years of age or older, the percent or number of four-year college graduates in that attendance area, the unemployment rate, the average family size, and median household income. Probably most important of all, we have data on youngsters from single-parent homes, which has implications for before- and after-school care programs, as well as calling for counseling and guidance programs that would not be found in schools and districts with a high percentage of intact, two-parent homes.

The kinds of data I have been discussing are furnished on a routine basis annually. It is mandatory that all schools receive this information. With respect to remedial programs, page A.1.a shows that 1980-81 and the pattern for 1984-85 has not changed for the above-average categories of scores. It has, however, changed somewhat for the average band of scores. I will skip the math achievement of our youngsters and move on to the next display, which is Stanine Profile by Ethnicity (page A.1.c). There are 14 different ethnic categories on that profile. If you work your way across that page from left to right, you find that, for reading, there is one American Indian from that school whose score we could not determine. Probably the computer rejected that set of answer sheets or something happened there--there was no response. That 50 means

50 percent. There was one other youngster of American Indian descent whose scores could be picked up and recorded, and that youngster's score is an 8 stanine, so that is the other 50 percent. Those two combined would be the profile for reading for the American Indian youngsters in grade 10. If you read across the page from left to right, we have done the same thing for math. In this case, the computers could pick up information on the American Indian youngsters. One scored in the fifth stanine, the other eighth stanine. If you look at the top line, for example, you will find that in stanines 1, 2, and 3 in reading, about 36 percent of part-Hawaiian youngsters are achieving in the below-average band of scores. Four percent would be achieving in the above average band, and the rest, of course, would be in between. Now, if you work your way down to the white category, you find that 12 percent of the youngsters are scoring in the below average band and something like 30 percent of white youngsters are scoring in stanine 7 to 9, which would be above average. For civil rights reporting purposes, I think that this serves a fairly limited purpose, but it does provide that additional edge for making decisions about improving the school program--especially targeting services for certain ethnic groups within that school.

Now refer to page A.5.a, Grade Point Averages of Less than 2.0 for Kailua High School. What we have done is to plot that over time. Look at the profile for grade 9. There is a pattern here that I think holds up for the entire state of Hawaii: We find that the ninth grade has the highest percentage of kids who have grade point averages of less than 2.0. Something like 45 percent in 1984-85, <u>half</u> of the freshman class, had GPA's of less than 2.0--1.9 or lower. You might say that is pretty bad, but compared to what it was in 1980, it is an improvement. It was about 53 percent. As for seniors, we find that about 20 percent of all seniors have GPA's of 1.9 or lower. Taking the other side of the curve, you find that on the next page (A-5-b) GPA's Higher than 3.0, the relationship gets reversed. The percent of students with GPA's of 3.0 or higher, among the full classes, would be highest in the senior class and lowest in the freshman class. Of course, compared to the percentages you saw in the first chart, the percentages here are much smaller. The way you interpret that, then, is that 28 percent of the seniors graduated with GPA's of 3.0 or higher. For that school something like 18 percent of the freshman class had grade point averages of 3.0 or higher. Seniors with Over 20 Credits (page A-6), reveals a pattern, with about 75 percent back in 1981 and is about 82 percent now. This is consistent with the statewide average of about 80 percent. Looking at Seniors Not Graduating (page A-7), recall that I spoke to you about the Hawaii State Test of Essential Competencies and the requirements not being met. There you have it for Kailua High School. There were four--and this is four youngsters, not four percent--from that class who did not graduate because they failed the test. On the other hand, no youngster failed because of not having met the requirements. That school, I believe, graduated about 180 youngsters last year.

We have data, of course, for transiency and absences (B-1)--transiency meaning the the mobility of youngsters; kids coming in, kids going out--and we show that in a form of a percent. If there are a thousand youngsters in a school, and there are 500 ins and 500 outs, we would show that to be 100 percent transiency. That is how we operationally define transiency. The other indicator on this display is average daily absence, and I think that is fairly familiar.

Refer to page B-2, District Exceptions. For this school, the number of outs exceed the number of ins, meaning that this particular school is losing youngsters to other schools. Or, I should say that in relation to the number of kids who are coming to that school, there is a net loss. They lost 148 youngsters and picked up 73. Now, this has all kind of implications. As I see it, employment is one reason, but for the high school, it's curriculum. A school on the other side of town offers a program that your high school doesn't offer. Consequently, I will move my youngster from your school to the school that does offer the program. Foreign languages, higher math, higher science--these are the kinds of programs that influence parents to move their youngsters out from the school in the community in which they reside and into another school.

For the School Climate Survey on D-1, we have a survey that has been done for that school starting in 1983. This one is for 1985. Six groups were surveyed, and we have the results there for general climate. We consider 2.0 to be the low water mark. Anything that will drop below 2.0 is considered to be a black star, and if it goes above 3.0, that is a gold star. Then again, we look at the discrepancies--the space between any pair of ratings. The lower right hand corner tells you the number of kids and others who participated in the survey. On D-2 we have broken out the data on the school climate by six or seven subfactors. It starts with respect and ends with caring. Look at the rating given to the school by students: roughly 2.6 for respect, 2.3 for morale, 2.0 for input, growth, cohesiveness, renewal, and caring. Students consistently gave the school the lowest ratings, and that rating that you see for Kailua High School is not atypical. Of course, the prinicpal will generally give the school the highest rating. We also provide some kind of a comparison data for the school on page D-3. Look at the 1983, '84, and '85 results. We find it has regressed for parents, but it has stayed about the same for students, the certificated and classified staff. It also dropped somewhat for the principal and vice principal.

Refer now to the census data (G). We are presenting these data for every school attendance area. For Kailua High School 82 percent of the persons 20 years of age or older are high school graduates. It is about 34 percent for four-year college graduates. The average family size is 3.4, the median income is $36,000 and the percent of youngsters from single-parent homes is 13.6. We are talking here about private and public school youngsters, since we were not able to sort out the data in a way that would enable us to get a report only for Kailua High School.

These then are the data profiles that all school principals use to make program decisions, work on accreditation, and orient their faculties and the community to the school. The two unintended purposes: one is to set short- and long-term goals for an indicators project, and the second, and, as I said, this is being resisted by some principals--is to provide a brokerage service. We are giving information in an attempt to match parents' needs and desires with the schools in which they might want to enroll their youngsters.

Oct. 31, 1985
NWREL

HAWAII DOE SCHOOL DATA PROFILES

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Contents

A. STUDENT ACHIEVEMENT DATA	ELEMENTARY SCHOOL	INTERMEDIATE SCHOOL	HIGH SCHOOL
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3. Retentions	All Grades	All Grades	All Grades
4. Students of Limited English Proficiency--Exit Rate	All Grades	All Grades	All Grades
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2. General Climate, Climate Conditions			
3. General Climate, Respect			

-over-

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	ELEMENTARY SCHOOL	INTERMEDIATE SCHOOL	HIGH SCHOOL
E. STUDENT DEMOGRAPHICS			
Ethnicity, Federal Connection, Public Assistance, Free/Reduced Lunch, Special Education, SLEP	All Grades	All Grades	All Grades
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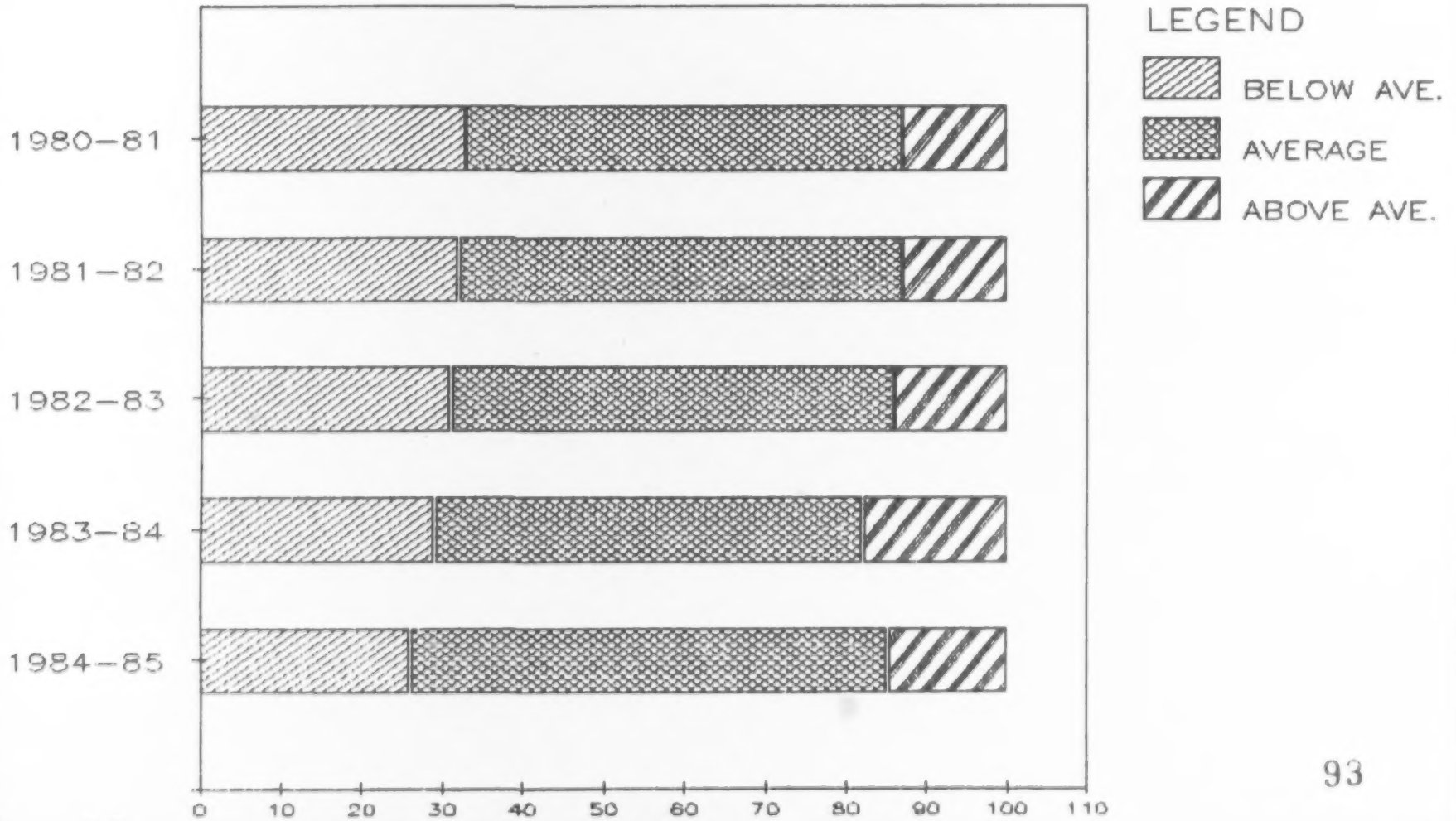
SCHOOL CLIMATE BASELINE DATA

STUDENT ACHIEVEMENT

GRADE 10 SAT READING

KAILUA HIGH SCHOOL

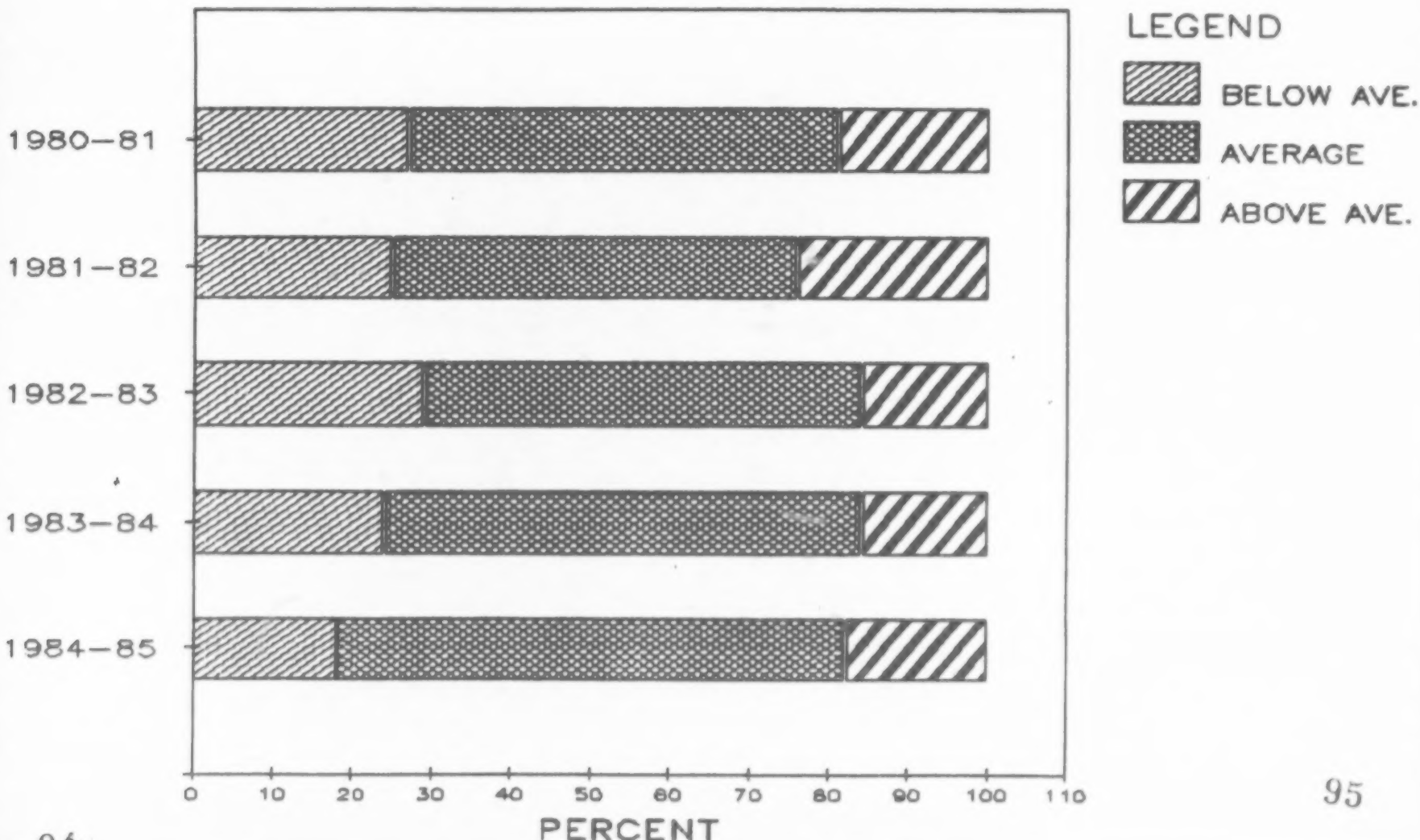


SCHOOL CLIMATE BASELINE DATA

STUDENT ACHIEVEMENT

GRADE 10 SAT MATH

KAILUA HIGH SCHOOL



A-1c

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ETHNICITY	TOTAL READING STANINE (NUMBER/PERCENT) 0	1	2	3	4	5	6	7	8	9	TOTAL MATHEMATICS STANINE (NUMBER/PERCENT) 0	1	2	3	4	5	6	7	8	9	TOTAL TESTED
NER INDIAN	1 50.0								1 50.0						1 50.0			1 50.0			2
LACK				1 33.3	1 33.3		1 33.3							2 66.7				1 33.3			3
HINESE					4 57.1	1 14.3	2 28.6							2 28.6	3 42.9	1 14.3		1 14.3			7
ILIPINO			1 3.8	8 30.8	7 26.9	4 15.4	3 11.5	2 7.7	1 3.8					6 23.1	8 30.8	4 15.4	4 15.4	3 11.5	1 3.8		26
AWAIIAN			2 11.8		6 35.3	3 17.6	5 29.4	1 5.9				1 5.9	2 11.8	6 35.3	2 11.8	2 11.8	1 5.9	2 11.8	1 5.9		17
ART-HAWAIIAN			10 9.3	29 26.9	37 34.3	21 19.4	6 5.6	2 1.9	3 2.8			5 4.6	18 16.7	39 36.1	28 25.9	12 11.1	4 3.7	2 1.9			108
APANESE	1 2.7			3 8.1	6 16.2	5 13.5	7 18.9	6 16.2	5 13.5	4 10.8				2 5.4	5 13.5	7 18.9	7 18.9	7 18.9	6 16.2	3 8.1	37
N EAN					1 33.3	1 33.3		1 33.3						1 33.3				1 33.3	1 33.3		3
ORTUGUESE	1 5.3			8 42.1	3 15.8	4 21.1	2 10.5	1 5.3			1 5.3	1 5.3	1 5.3	7 36.8	3 15.8	1 5.3	3 15.8	2 10.5			19
UERTO RICAN				1 50.0	1 50.0									1 50.0	1 50.0						2
AMCAN	1 12.5	1 12.5	2 25.0	2 25.0	2 25.0									4 50.0	3 37.5	1 12.5					8
HITE			3 5.0	4 6.7	12 20.0	8 13.3	15 25.0	9 15.0	4 6.7	5 8.3	2 3.3			5 8.3	14 23.3	9 15.0	17 28.3	4 6.7	7 11.7	2 3.3	60
HER					2 28.6	1 14.3	2 28.6	2 28.6						3 42.9		1 14.3	3 42.9				7
NKNOWN				1 100.0											1 100.0						1
CHOOL TOTAL:	1 .3	3 1.0	17 5.7	57 19.0	82 27.3	50 16.7	43 14.3	24 8.0	14 4.7	9 3.0	3 1.0	1 .3	7 2.3	45 15.0	87 29.0	57 19.0	47 15.7	26 8.7	21 7.0	6 2.0	300

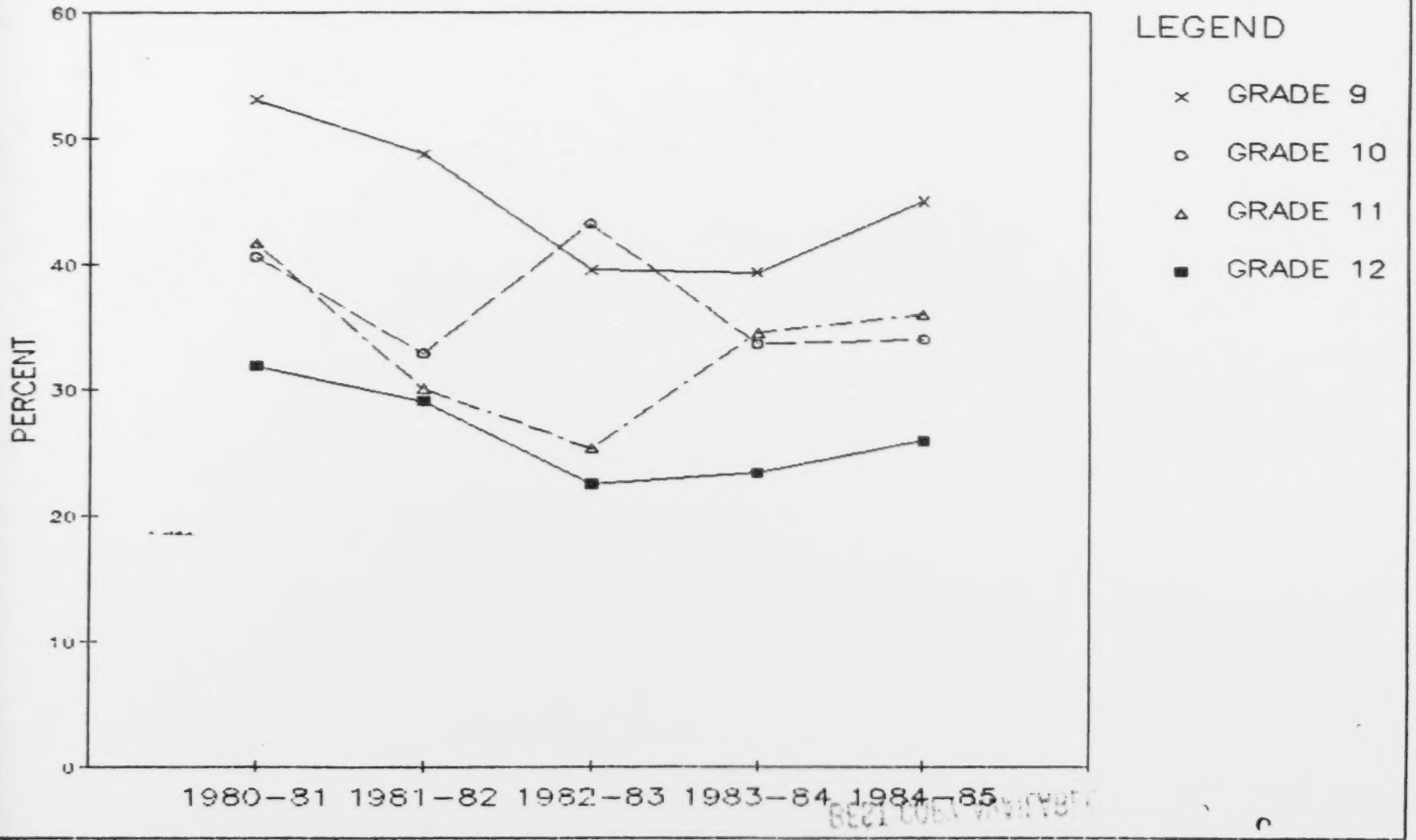
A-5a

SCHOOL CLIMATE BASELINE DATA

STUDENT ACHIEVEMENT

GPA LESS THAN 2.0

KAILUA HIGH SCHOOL

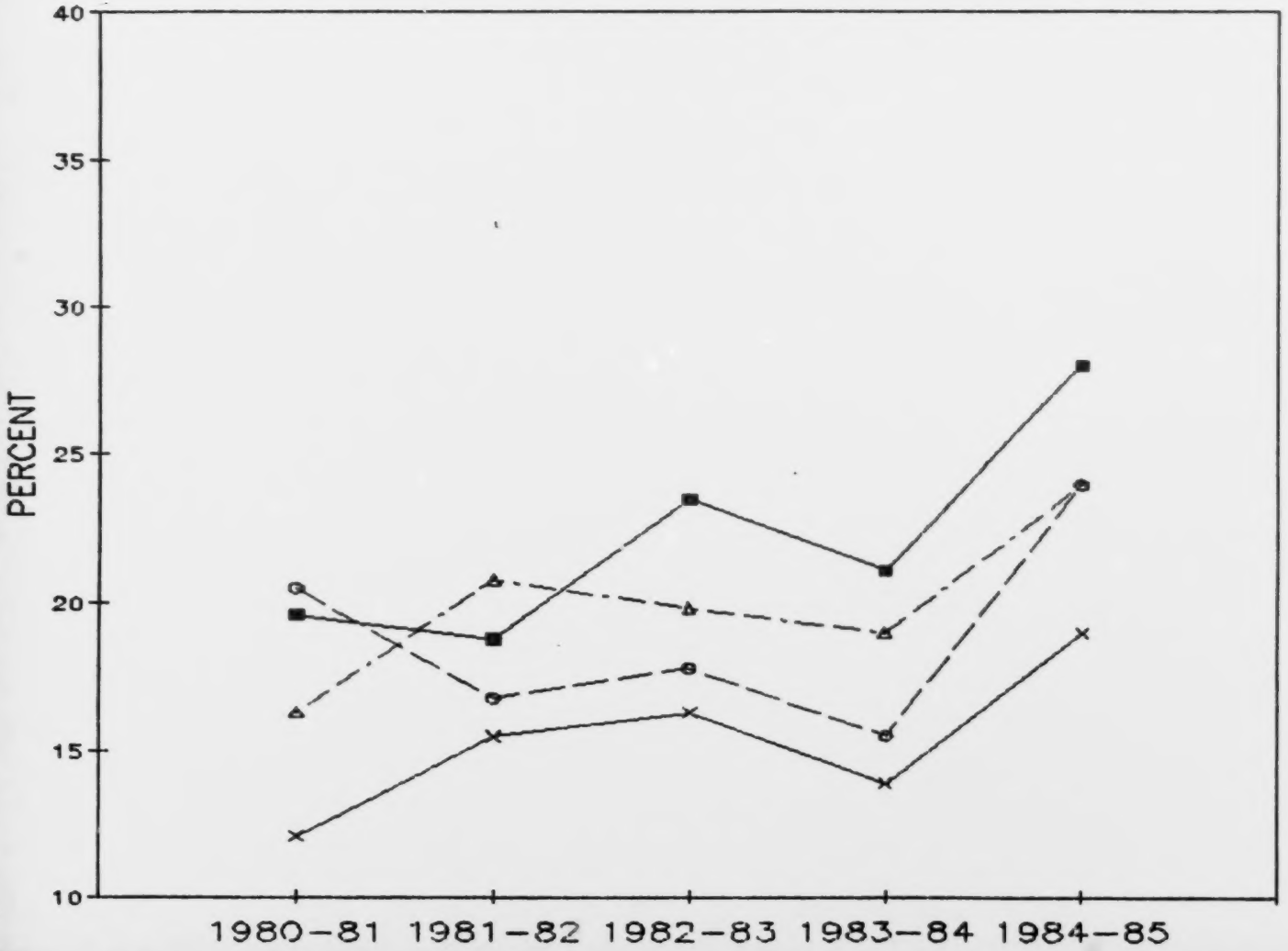


SCHOOL CLIMATE BASELINE DATA

STUDENT ACHIEVEMENT

GPA HIGHER THAN 3.0

KAILUA HIGH SCHOOL

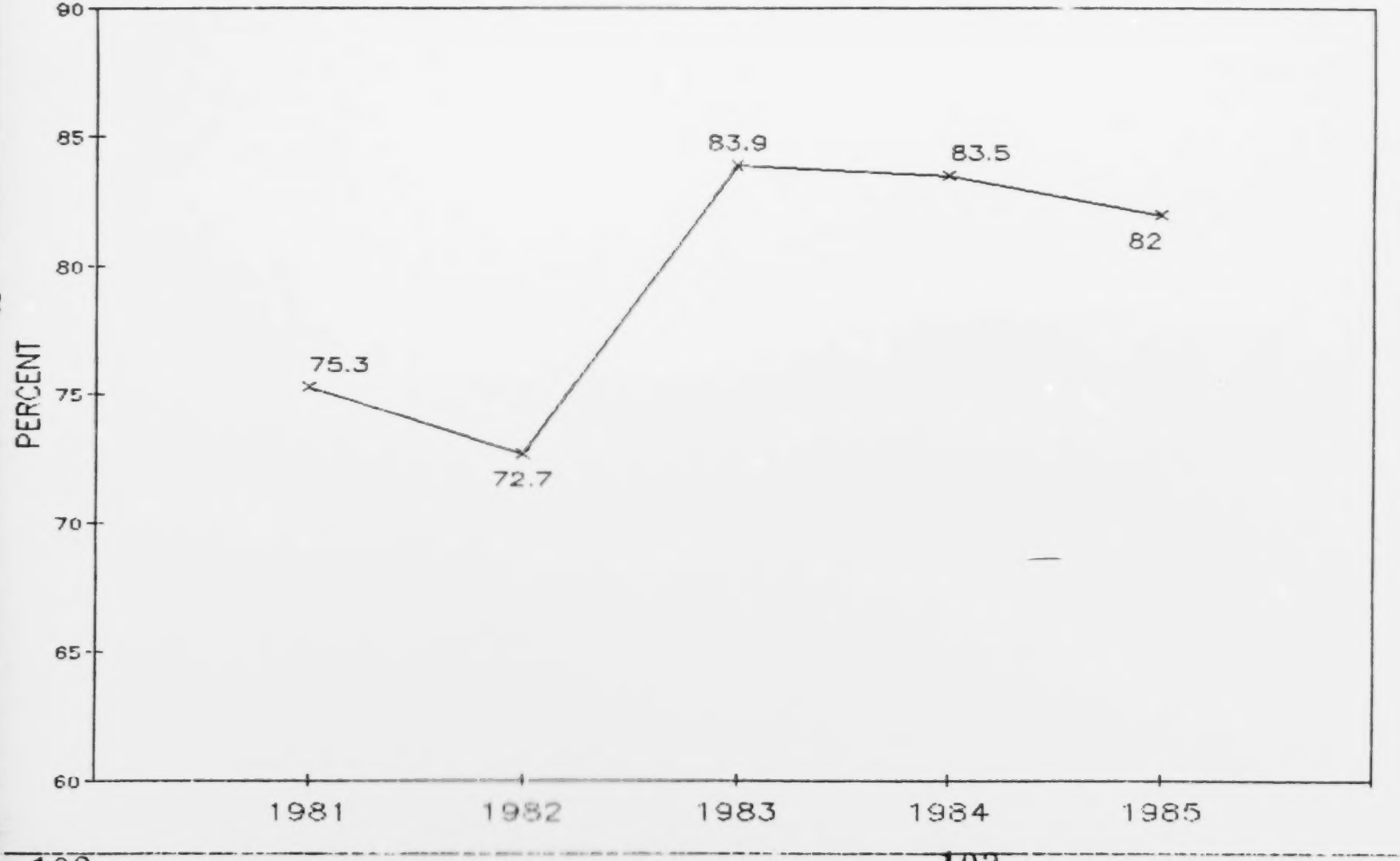


SCHOOL CLIMATE BASELINE DATA

STUDENT ACHIEVEMENT

SENIORS OVER 20 CREDITS

KAILUA HIGH SCHOOL

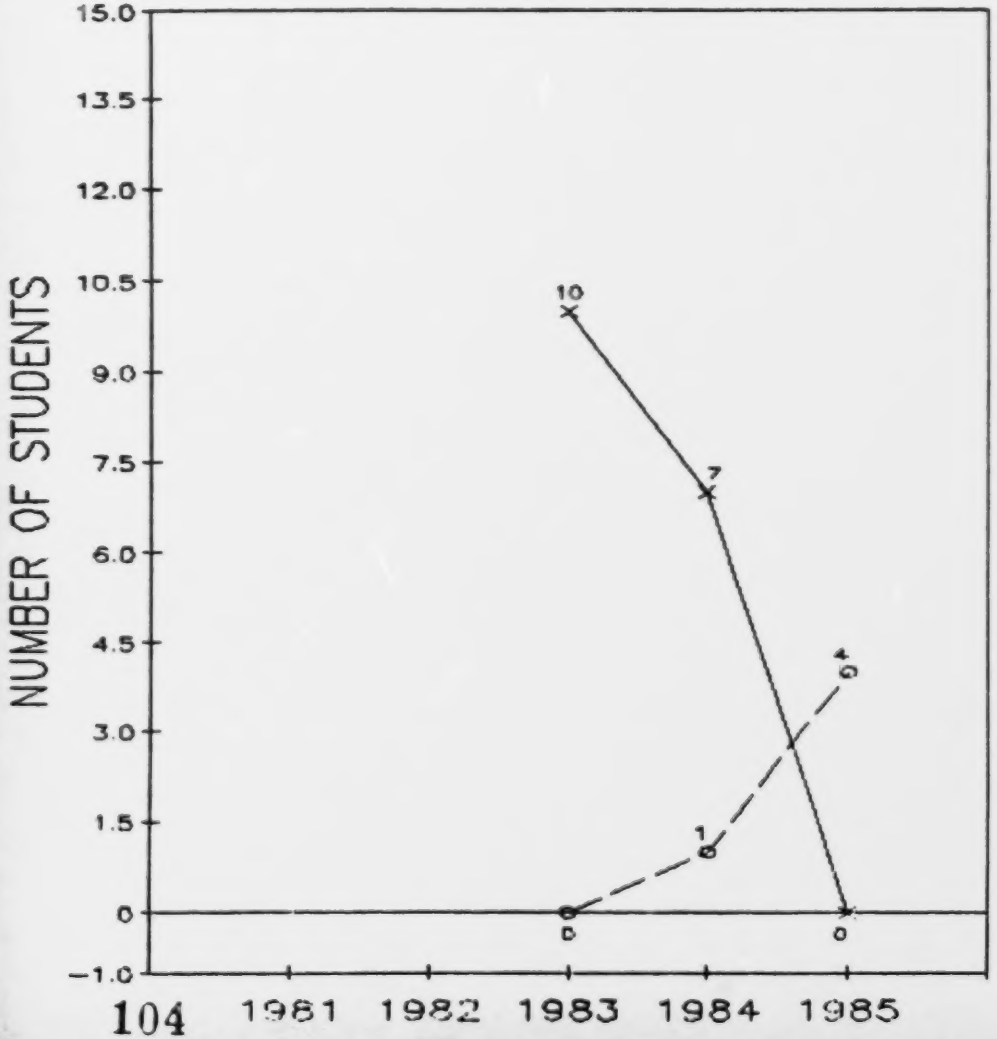


SCHOOL CLIMATE BASELINE DATA

STUDENT ACHIEVEMENT

SENIORS NOT GRADUATING

KAILUA HIGH SCHOOL



LEGEND

× FAIL REQ. COURSES/CREDITS

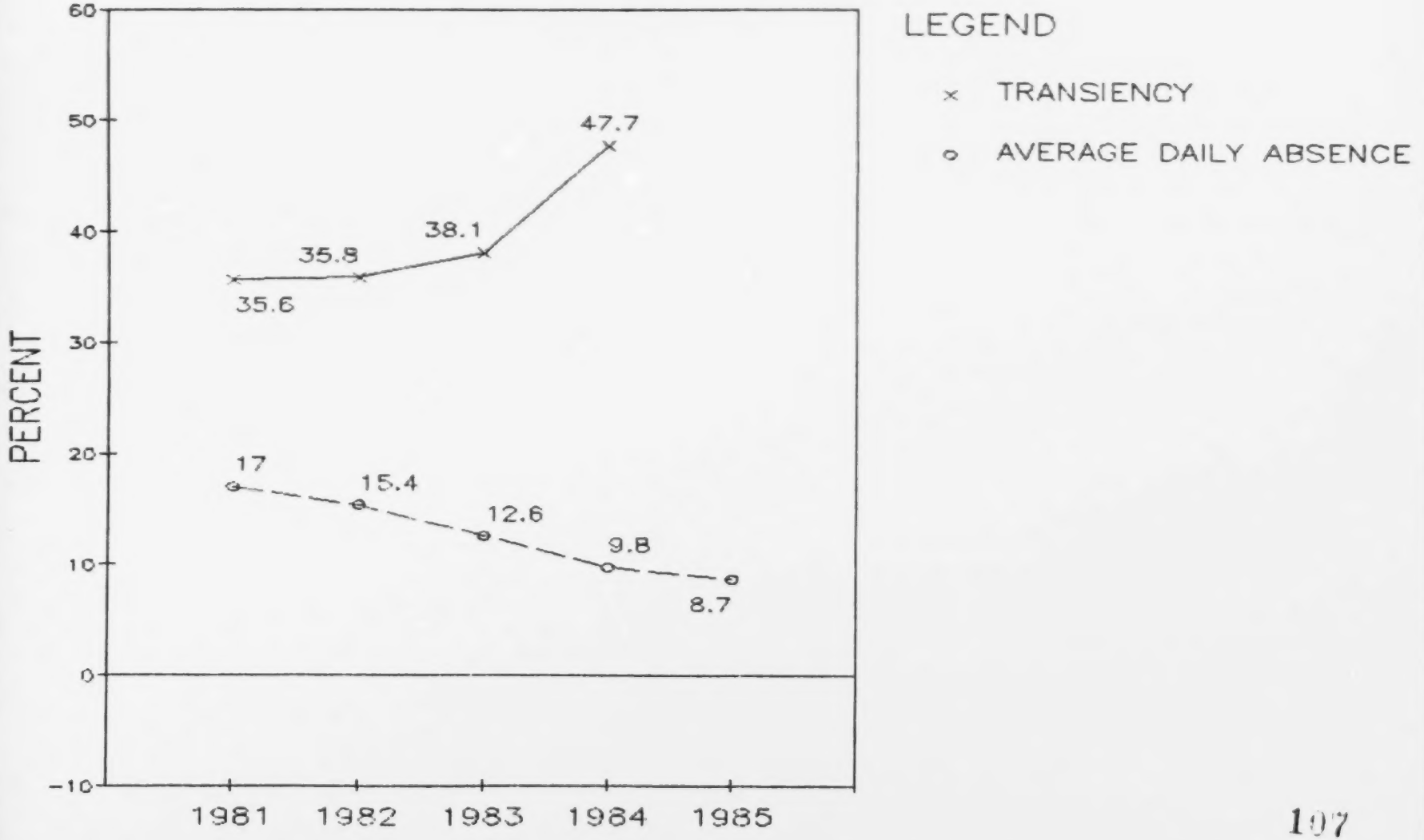
o FAIL HSTEC, CECC, ECCC

SCHOOL CLIMATE BASELINE DATA

STUDENT ATTENDANCE

TRANSIENCY/ABSENCES

KAILUA HIGH SCHOOL

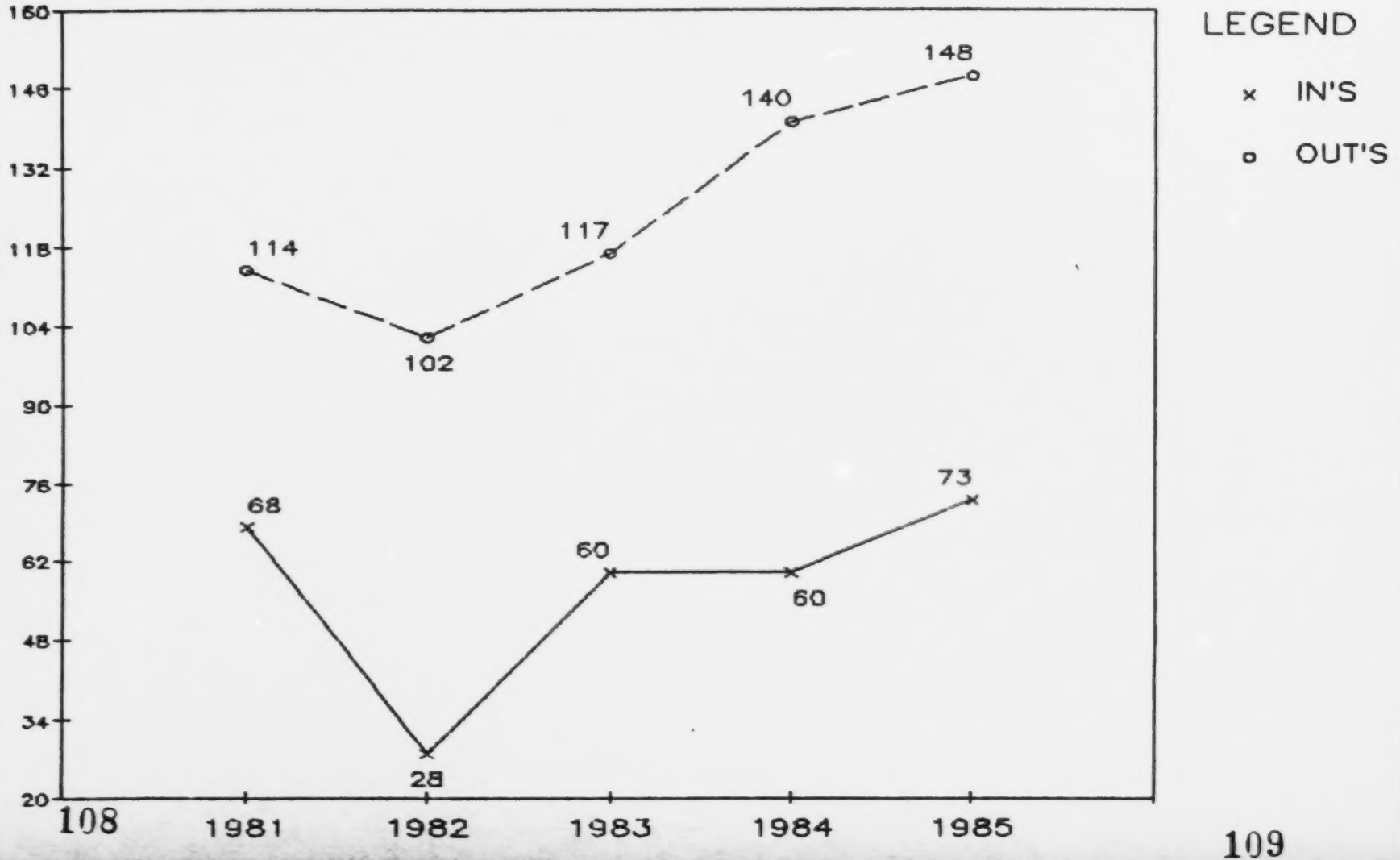


SCHOOL CLIMATE BASELINE DATA

STUDENT ATTENDANCE

DISTRICT EXCEPTIONS

KAILUA HIGH SCHOOL

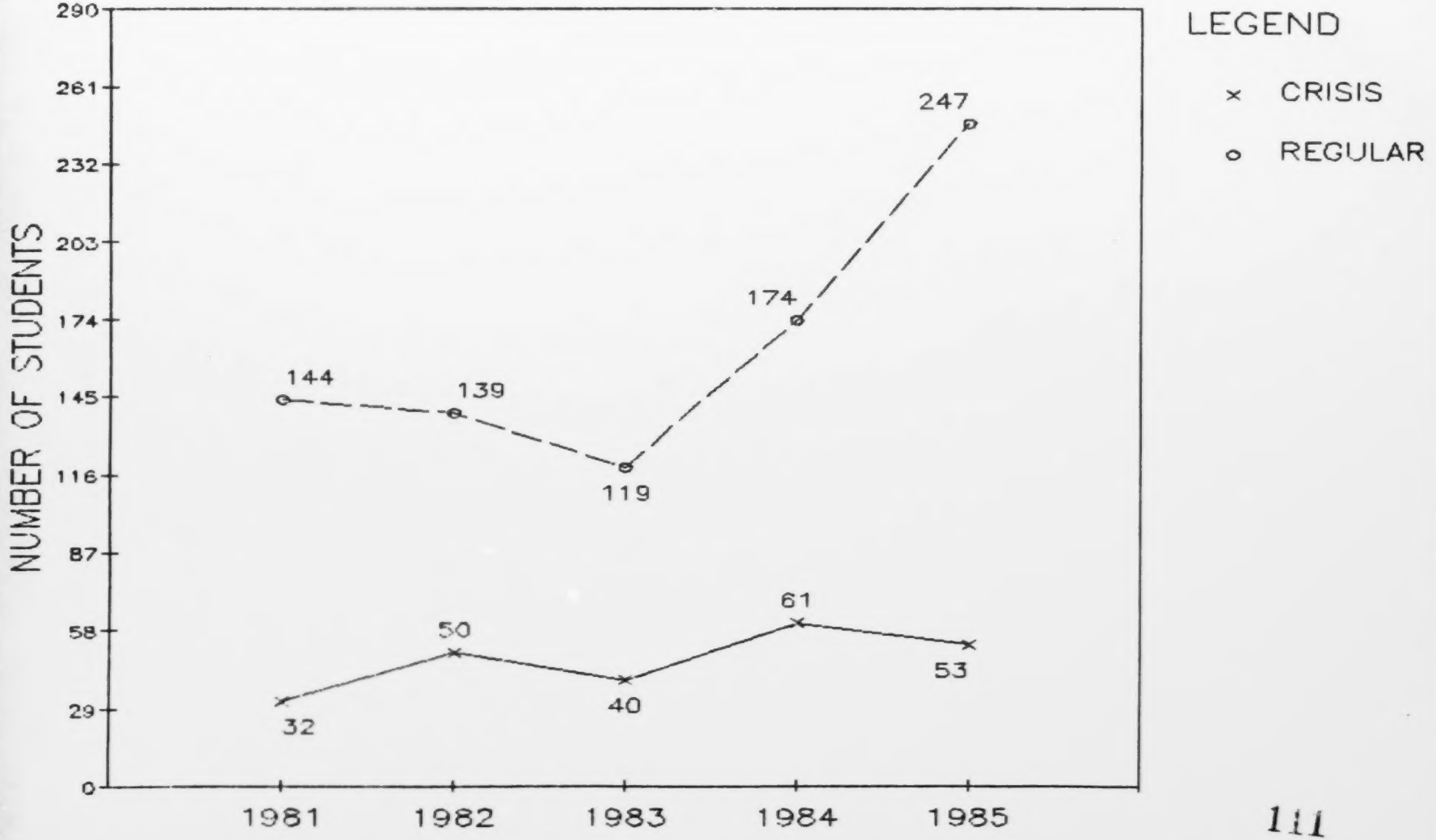


SCHOOL CLIMATE BASELINE DATA

STUDENT BEHAVIOR

SUSPENSIONS

KAILUA HIGH SCHOOL

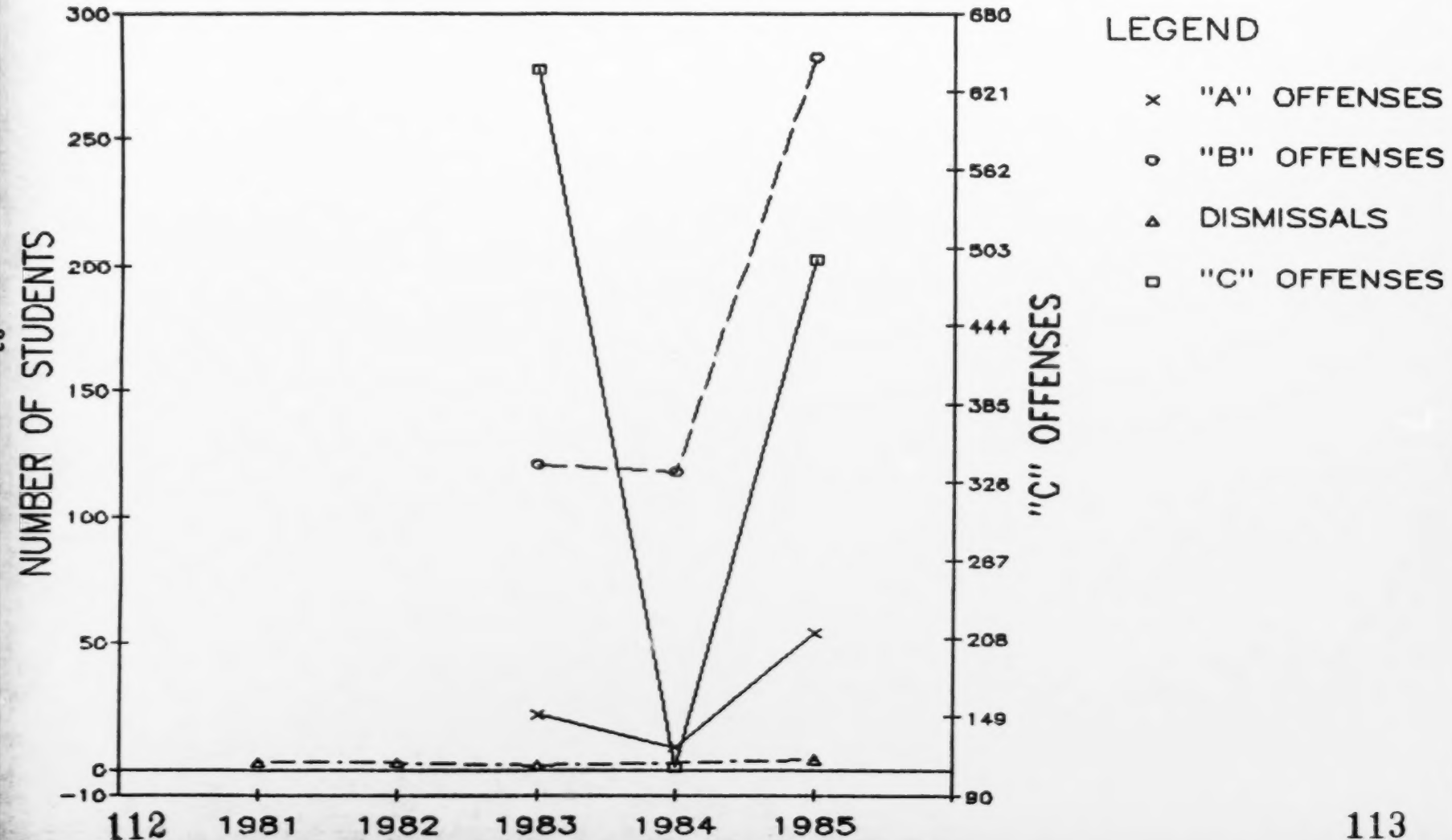


SCHOOL CLIMATE BASELINE DATA

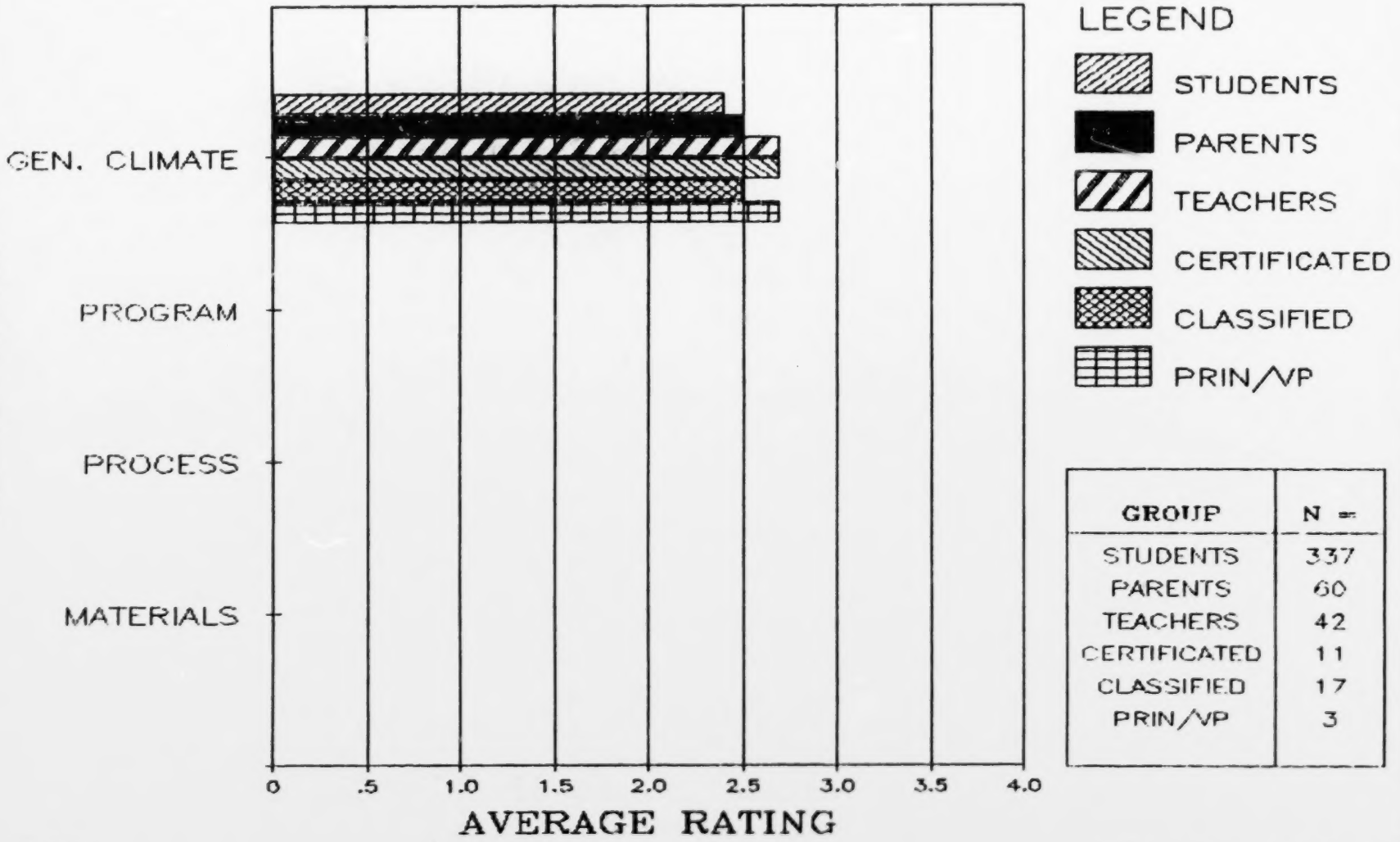
STUDENT BEHAVIOR

INCIDENT REPORTS/DISMISSALS

KAILUA HIGH SCHOOL



SCHOOL CLIMATE SURVEY
SUMMARY
KAILUA HIGH SCHOOL 1985



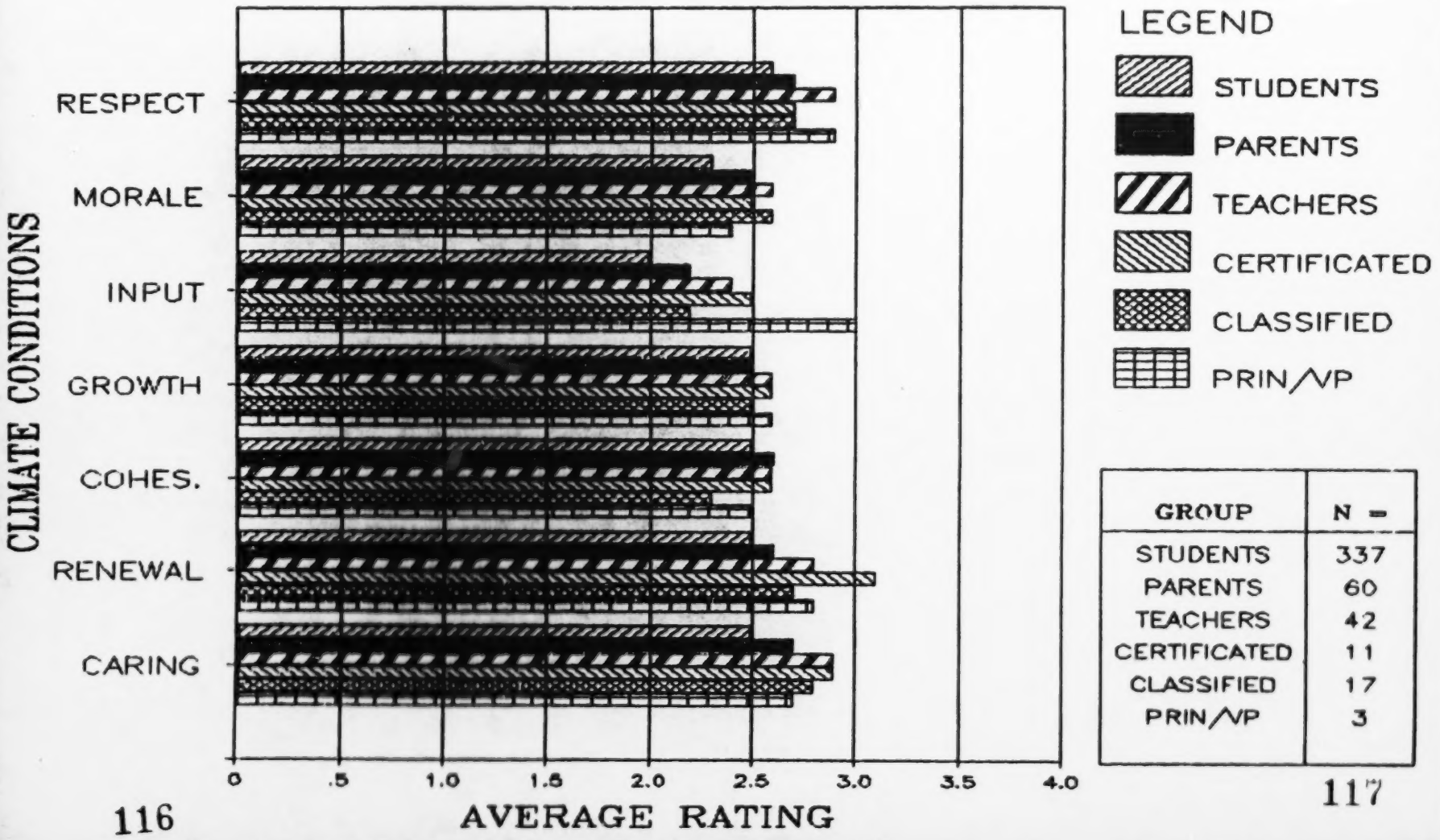
GROUP	N =
STUDENTS	337
PARENTS	60
TEACHERS	42
CERTIFICATED	11
CLASSIFIED	17
PRIN/VP	3

DATA FROM "WHAT IS"

SCHOOL CLIMATE SURVEY

GENERAL CLIMATE

KAILUA HIGH SCHOOL 1985



GROUP	N =
STUDENTS	337
PARENTS	60
TEACHERS	42
CERTIFICATED	11
CLASSIFIED	17
PRIN/VP	3

116

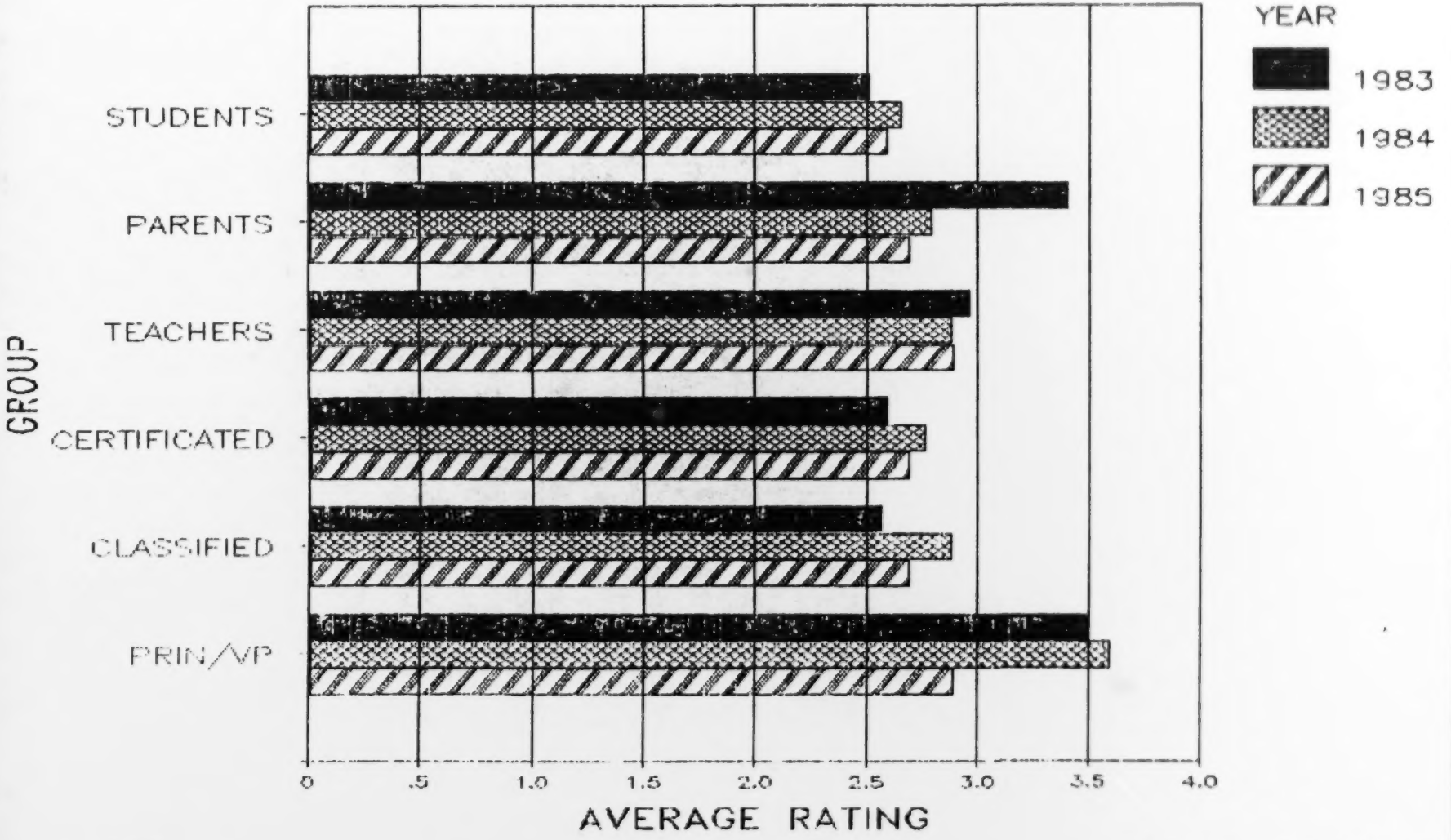
117

DATA FROM "WHAT IS"

SCHOOL CLIMATE SURVEY

GENERAL CLIMATE — RESPECT

KAILUA HIGH SCHOOL 1983 — 1985 COMPARISON



DATA FROM "WHAT IS"

1980 U.S. Census Data for 1980 DOE School Attendance Area

1.	High School Graduates Among Persons 20 Years of Age and Older	82.8%
2.	4-Year College Graduates Among Persons 20 Years of Age and Older	34.2%
3.	Unemployed Among Persons 20 Years of Age and Older	2.8%
4.	Average Family Size	3.4%
5.	Median Income	$36,285
6.	Child (Children) from Single-Parent Home	13.6%

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State Activities in Developing School Profiles, Data Bases and Indicators

Wayne Neuburger
Oregon Department of Education

There are two aspects of the Oregon experience that I would like to talk about--two things we are trying to accomplish in terms of looking at indicators in the state. The first is to look at what we are calling goals for 1990, and the second is to look at school profiles.

In the goals for 1990, we are trying to look backwards as well as forwards. Both of these efforts have come out of the educational reform effort in the state which is referred to as the Oregon Action Plan for Excellence or OAPE if you abbreviate it. The reform was initiated two years ago, by our State Superintendent, and he identified eight areas in which he wanted us to take action. Prior to formalizing the OAPE, he assigned a series of task forces to look at a number of areas and make recommendations to the state in terms of action that they ought to be taking. The areas that they looked at included the areas of curriculum, assessment of common curriculum testing; staff effectiveness including the areas of compensation, recruitment and staff development; technology and the effective use of time.

The task forces worked for about four months and involved a considerable number of people in the state. They made recommendations to our state board and superintendent, with many of those recommendations being adopted. That moved us forward in terms of some action in the state. We view the actions as a continuation of something that was started back in the early 70's when we established a set of standards for public schools that was orientated towards an outcome based approach to education. Schools or districts were expected to establish goals for their programs. They would monitor students' progress towards those goals, and then look at their educational programs' effectiveness in meeting the goals and make modifications in programs based on the data related to those outcomes. They would also establish criteria for graduation in terms of student competencies. That program is still in effect but we have changed, perhaps, the role of the state. As Don Egge mentioned earlier, one of the things we looked at was what is the appropriate relationship between local districts and the state. What are the roles we need to play? One of the things we decided was that we need to have joint responsibility for the outcomes of education. The state has responsibility for helping establish those outcomes. The first step was to move forward with a common set of goals in the curriculum area. That is consistent with the philosophy that we had before. It does, however, change the relationship between local districts and the state.

We have established a task force of research and evaluation professionals in the state, to look at where we are. We are in the situation that Washington was in. We have been using these standards for awhile, but we don't have any data as to how effective we have been in the implementation of this kind of a program. We want to take a look back at what has been happening and then we want to set some targets for 1990, so we are trying to put those two things together in terms of a research effort to help us look in both directions.

As part of the Oregon Action Plan, we identified a series of variables that we wanted to establish as goals. The first was to improve student achievement across the state and this group has helped us identify some possible indicators. We are not finished with our task and some of these will probably be revised or added to. What we have, on student achievement is from our assessment results, but is fairly meager right now. We are trying to expand that in a way that doesn't cost money. If you have any ideas, I would be glad to talk to you later.

The second consideration was improved community involvement and satisfaction with the schools, including the number of volunteer hours, citizen satisfaction and attitude, and employer satisfaction. We have some data on this, particularly on employer satisfaction with students who have been involved in vocational education programs.

The third area dealt with improved student success after leaving school, including high school attrition rate, job placement or continued study, and success in post-secondary education.

The fourth was improved school climate which included student, teacher and administrator perception of the school climate, student attendance rate, teacher attendance rate, student behavior in terms of suspension and expulsions.

The last area is improved school productivity which we are finding difficult to measure. We have identified the cost per unit of credit as one possible indicator.

In some of these areas we will gather data, while for others the data is on hand. For some of the indicators we will be satisfied with information from a sample of districts because these are statewide targets and we are looking at the impact over time of a statewide effort. From our perspective we need that information, but it is not necessarily information that is required from every school or from every student. So our approach will not necessarily be one of looking at it on a school by school basis. We are interested in statewide indicators.

The second area of concern is that dealing with the school profiles, and it has a different orientation or purpose. The task forces that we established looked at that issue. They said that it should address three areas: student performance, effective practices and programs and services. Then they said that it should minimally profile the following

areas: school and district philosophy; student performance data; use of effective practices; description of program services and personnel; and fiscal data. They also recommended that the profile should be uniform, statewide and updated yearly, and the information should be understandable to the public, should focus on school improvement and not school comparisons, and should be an efficient data collection system. That is a big task.

We took that information and have been working on trying to establish our orientation to the idea of a school profile. We have come up with the following definition and purpose.

First of all, it should be a profile of summary information about a school. That includes data on program outcomes, processes and resources that provide the comprehensive description of its performance and other characteristics over time.

Next, the purpose is to systematically monitor trends for school effectiveness, impact and productivity as the basis for informed policy management and operational decisions at all levels of the school system using multiple indicators of educational quality and equity.

Last, the focus of the profile should be at the school level, requiring the committment of the school staff. The other levels of the school system should provide support. I want to spend a little time talking about this because I think it is an important part of our focus.

The information that we have at a state level is very minimal. In fact, it is inadequate for the kinds of decisions that need to be made at a school level. We cannot gather all of the information that a local school would want in making decisions at a school level. We don't purport to have a profile that we would generate at the state level that would address the purposes we identified. So, it has to be generated at the local level. Effective change occurs when people who are going to make the change have a stake in the change. First of all, they have to feel that whatever it is that they are going to be dealing with is important, that there is a need in that area, and that they have an opportunity to influence the decisions that will be made. Then whatever change does occur, they will perceive that it is positive change, with data to back that up. We think those are important issues and we think those are things that need to be dealt with at a local level.

Don Egge talked about the Hoquiam Effect, I want to talk about the "so what" effect. Recently, we had a meeting where there happened to be a teacher (of all things) amongst all these administrators who got up and said, "Well, what I'm going to talk about is something that I teach all my kids and that is to always ask the question 'so what'." We were talking about all these grandiose things and he was applying the "so what effect to them". If we are going to do this, the question is so what?

Why are we doing it? What impact is it going to have. If we ask ourselves that question and it drives us down to the realization that if we are going to make any change, the change has to occur at the school or classroom level, then everything we do ought to be geared to that level. It ought to be a system that supports change at a school and classroom level.

In developing our materials, we made some assumptions. The first assumption was that we should have local indicators and in many cases we have only one indicator at the state level. Local districts are going to have to supplement this with other indicators, and that is appropriate because they know which indicators they want to look at. In this state (I don't know how it is in other states) there has been, over a number of years, a lot of profiling activity or school improvement activity. We may not have called it that, but it was a systematic look at data on a program and looking at a number of different factors for a program and making decisions bases on these factors. I think we want to recognize that effort. This is not a new thing and we hope that our statewide effort will make it a more consistent effort throughout the state. In order to do that, you need to have multiple indicators and the profile is only one element in decision making. This was brought up earlier--that the information you have on paper may help influence the decision, but there are a lot of other factors involved. The profile will act as a catalyst for trouble-shooting and corrective action and Steve Slater will talk more about that later. My experience has been that if you have data, particularly if it is data that is important to people and you lay it out in front of them, they will deal with it. They will take action based on that data, but it has to be important data. It has to be their own data. The change over time is the best comparison, rather than a comparison from school to school or comparison to a norm.

In order to have a balanced set of data regarding a school's program, will usually require the school to gather data on their own. Often this data may be less "objective" than data gathered from formal instruments. So, if all your achievement data related to, say, basic skills and that is only one area of your program, you may need to supplement it with whatever data you can get your hands on (perceptions of higher level thinking skills, or other areas in your curriculum) rather than to focus on only the one area.

We set up a criteria for selecting indicators, including utility for decision making, sensitivity to change, commonality, validity and reliability and the feasibility of getting ahold of data understandable to lay audiences.

We reviewed the information available in the computers and paper files of our State Department and tried to find what was there that we could put together for a profile. The logical way is to define what you want on a profile and then collect the data. But when you are starting, sometimes you have to resolve to use what you have and then try to put it

together in some kind of organized fashion. Here is what we came up with. First of all, how many students do we have at a particular school. In this state we have a lot of schools that have small numbers of students; we have some schools that have less than ten students in the whole school and what does a school profile mean in that particular situation? There is a wide variability that can occur. So I think that, in this state, student enrollment is an important variable. We also have student attendance rate, and student mobility. For student achievement the only measure we have right now on a statewide basis is eighth grade test results for the graduation rate and what we will give this first year is a state rate. We know what the state rate is, but we don't know what each school rate is. We will provide a set of state data next to local data so they can compare where they are in relation to the state. We will include student ratio and ethnic composition. We will also look at the percent of students from families below the poverty level (what we have there is an estimate from the principal). We also have the students who speak languages other than English in the home. That is information we received in our eighth grade assessment which is based on a sample of the schools--we don't have that for all the schools, as well as for parents' education/occupation. Then we have the teacher experience and training, and teacher turnover.

This is our beginning and we will be meeting with some people to talk about this entire process and looking at other data elements, but before we begin asking people for a lot of data--well, they have told us already, "Don't ask for a whole bunch of stuff and put us through alot of extra work if it is not going to be useful." So the first thing we need to do is identify needs. If I ask for additional information from schools to use in a system like this, we want to measure it against this criteria, we want to be sure, in fact, that it will be useful information.

State Activities in Developing School Profiles,
Data Bases and Indicators

Stephen J. Slater
Oregon Department of Education

Today I would like to talk about a dilemma we have tried to resolve in putting together state-generated school profiles. In designing a school profile that the state could feasibly provide, we rather quickly came to the conclusion that it is hard to get good data on the factors that matter the most to school effectiveness. It frustrated us that the state can only scratch the surface of what goes on in a school. A good example is the variable of academic learning time mentioned earlier this afternoon. The Department of Education can ask how much time is in the school day. We can even ask for information on how much time is allocated to a given instructional area. But, we can't very feasibly ask teachers to do the recordkeeping that gets at academic learning time. So we have a problem with the utility of state-generated profiles for the purpose of reflecting the variables in schooling that are most important, yet hardest to measure. How are we dealing with this problem? I would like to talk about two things. The first is Oregon's vision of school improvement. The second is the state's role in supporting school improvement.

If there is one fundamental principle that has guided Oregon's approach to school improvement over the last decade it is this: meaningful and lasting efforts to improve school effectiveness originate from within the school system, as opposed to being externally directed or mandated. The state has recognized that commitment to continuing self-renewal and improvement is the hallmark of effective schools.

The model of school improvement underlying Oregon's Standards for Public Schools and the Oregon Action Plan for Excellence calls for nine conditions to be met.* The model assumes that schools can and should be rational and accountable enterprises where:

1. Instructional programs (such as mathmatics and science) are developed on a K-12 basis

2. Goals and standards for student learning are agreed to and made explicit

3. Classroom instruction and materials are appropriate for each learning goal and for each student

4. Assessment of student learning is sensitive to (or aligned with) the goals of instructional programs

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*I am indebted to Ray Talbert, of the Oregon Department of Education, for his formulation of these conditions.

5. Student achievement data and a broad range of related information are systematically gathered, reported, and analyzed to determine: the effectiveness of instructional programs, the extent to which the school is seen as a productive place to work and learn, and, the extent to which the outcomes of schooling expected by the community, district and school are being achieved

6. Formal problem solving procedures are initiated whenever assessment results indicate that expectations for student learning are not being met

7. The school staff has the ability to identify and implement changes that will result in improvement when improvement is needed

8. There is a continuing effort to ensure the adequacy of the school's standards for student outcomes, and to keep the school's curricula current

9. The district is committed to providing the required resources and support, including a staff development program that focuses on the staff's ability to implement and operate this model of schooling.

The essential concept embedded in Oregon's model schooling is best expressed by John Goodlad. In the Foreword to The Structure of School Improvement (Joyce, et al., 1983), he says that school improvement occurs when the process is established as part of the regular business of educational life. This principle is worlds apart from prevailing notions. It means, for example, that instead of seeking to install innovations, a school develops the capability to innovate. In effect, it becomes self-renewing.

The major dilemma facing educators who work outside the classroom (e.g., at the district and state level) is how to create the conditions for effective teaching and learning without imposing excessive controls that stifle teachers' creativity or drain their energies in non-instructional tasks. Some believe that school reform can be accomplished by "tightening the screws" from the state level--mandating a uniform set of schooling practices assumed to increase student achievement. In Oregon, on the other hand, we don't equate high standards with standarization of means and methods of schooling. We agree with Peters and Waterman, that effective organizations are characterized by the co-existence of firm central direction and maximum individual autonomy. Such organizations are unyielding on a few key values; in the case of schools the skills and knowledge children are expected to learn. But at the same time, effective organizations insist on entrepreneurship and innovation at the front lines. Thus, the key question we have been wrestling with at Oregon Department of Education is how to mobilize delivery-level expertise and free up the creativity of teachers and building administrators?

Recalling the nine conditions I listed earlier, a major ingredient in Oregon's model of school improvement is (1) the systematic monitoring of information on key performance variables, (2) analyzing such data to diagnose potential problems and (3) taking the indicated corrective action. These three steps essentially constitute a troubleshooting procedure. The purpose of troubleshooting is to diagnose the malfunction of an existing instructional program that is not working effectively. Or conversely, as the saying goes, "If it isn't broke, don't fix it." This approach stands in contrast to the attempt to import a new instructional program, complete with teacher-proof materials and hermetically sealed student activity kits. The latter approach may produce temporary learning gains, but ultimately, we feel, it de-professionalizes teaching.

We believe the development of troubleshooting techniques in the schools holds promise for stimulating local innovation and problem solving. An appropriate state role, therefore, is to provide the tools, technical assistance, support, and incentives for schools to effectively troubleshoot their instructional programs. The model we are pursuing is derived from the work of Ralph Vedros and Ray Foster at the Florida Department of Education. They have developed a method of "situation analysis" which allows one to describe the circumstances operating in a school across four organizational levels.

First, at the student learning level, situation analysis provides a description of student characteristics together with student performance patterns and learning expectations.

Second, at the instruction level, factors are described, such as whether students are meeting entry requirements, are being sufficiently exposed to content (which gets at academic learning time), provided feedback and reinforcement, and motivated properly. A host of school climate indicators fall in this catagory as well. The instruction level also encompasses the description of teacher compentencies and working conditions in that school.

Third, situation analysis at the management level includes job and authority specifications, resources, school organization, staff incentives, and provisions for staff development.

Finally, the policy level involves an examination of the type and quality of guidance, supervision and regulation that take place at the district level. It includes an investigation of program coordination across school sites, allocation of resources, and program evaluation procedures.

The process of situation analysis involves a series of probes, beginning with deficiencies in the student performance, and then moving upward to investigate the instruction level. As Vedros and Foster describe the process, first a set of hypotheses is formulated about the causes of low student performance due to the situation at the instruction level. These conjectures can be generated either from professional judgement or intensive analysis of student performance data. The hypotheses are subjected to verification through a variety of formal and informal data gathering techniques (e.g., interviewing, observation,

analysis of student records, use of surveys, and so on). Information is sought which either affirms or rejects the hypotheses, extends the hypotheses to include other causes, or links the cause with another at a higher organizational level. Basically, situation analysis is a kind of backward mapping process, beginning with student performance data, and then establishing the linkages between low student performance and factors that characterize the instruction level, management level, and policy or program direction level. This cluster of causes, together with the interrelationships among them, show the location of program malfunctions and provide insight into the redesign of program activities, procedures and policies.

To sum up, in Oregon we are working on school profiling on two fronts. First, we intend to produce a relatively parsimonious set of indicators that would be common to all schools, providing information on trends in student performance, school characteristics and contextual variables. Wayne Neuburger, in the previous presentation, described our current thinking on this front. The generation of profiles that are common to all schools would in effect prime the pump, hopefully providing an incentive for local profiling.

I want to emphasize that we don't intend or even anticipate that the state-generated school profiles would supply all the information necessary for good program improvement decisions. Thus, our second focus is to support the development of troubleshooting techniques at the school and district level, primarily through assistance in local profile development and the analysis of data from multiple indicators that are selected locally. The Department of Education can provide a variety of instruments and models to assist in the situation analysis process described earlier. We feel that to do a good job of problem solving schools need a broader range of information than the state can provide. This information must be sensitive to local needs. A by-product, by virtue of the fact that a school selects its own indicators, is that the threat potential of profiling is dramatically reduced. There would be no schools with the same data sets, reducing the threat of interschool comparisons.

Our ultimate goal is to empower the school, through the careful and deliberate analysis of outcome process and contextual data. As Goodlad stated, our intent is to make school improvement a part of the regular business educational life.

The High School and Beyond Database
Local, State, and National Perspectives

Dennis Deck
Northwest Regional Educational Laboratory

I am going to briefly describe a database that has applications at the local, state and national level. The High School and Beyond Study provides an interesting look at the educational and occupational plans and activities of high school students. The Department of Education, Congress and many researchers have made use of the extensive database generated by this study. The State of Washington has piggybacked on the national study to create its own database and made a number of decisions based on those results. The Northwest Regional Educational Laboratory has been working with districts in Washington and Oregon to make local use of it.

The High School and Beyond study was initiated by the National Center for Educational Statistics (NCES) in 1980. Based on the National Longitudinal Study that was conducted from 1972 through 1978, the study looks at the plans and activities of high school sophomores and seniors with a follow-up of second year graduates. The study looks at both the education students are getting and their educational plans, their occupational plans and how students are preparing for their occupation.

The comprehensive database generated by the study includes ability test and survey data from about 58,000 sophomores and seniors in the first year. There were also school, teacher and parent surveys linked to the student responses.

The design was longitudinal, designed to follow-up the same students at two year intervals. Sophomores in 1980 were included as seniors in 1982 and graduates in 1984. Actually, little has been published about the longitudinal results of the study. Most studies and NCES reports have focused on the difference between the 1980 results with the 1972 National Longitudinal Study results.

I want to focus on the senior survey itself because I think that it is the core of the study. From the state and local perspectives it seems the most useful. The survey asks seniors what they are going to do when they leave school, what job they think they will have, and what work experience they have currently. It asks whether the student is academically bound or is in a vocational type program and what courses they plan to take. It asks for detailed information about the school program, about support from the home, about self or school attitudes, about further educational plans (either college or vocational), and about the student's anticipated vocation.

Now I will touch on some of the national findings that show typical uses people have made of the data. Between '72 and '80, studies have revealed an inflation in grades. These studies also noted a decline in the homework students were doing. More recently published data shows that there is a discrepancy between opportunities in the job market and what students were actually planning to do. Let me show you part of that. As you can see on the transparency, the dark bars represent opportunities in the labor force and the shaded bars are what seniors want to do. You can see that the

professional, technical skills are the glamorous jobs, the jobs kids say they want, but clerical fields, the crafts or trades, and the services are were the jobs are. So, there are some real big discrepancies here. I just wanted to show this as an example of one national finding that has come out of the National study.

The State of Washington has made much use of the High School and Beyond database for two reasons. First, they wanted to have reliable data for state level decision making. Second, they wanted to have a database for local comparisons. They wanted local districts to have representative state data for self-comparison. During the national study in 1980, they had National Opinion Research (NORC), the High School and Beyond contractor, over sample in the state of Washington so that there would be enough students tested to have more reliable data. In 1982 they did their own follow-up because they found that NORC's services were getting expensive.

The state data, like the national data, is available for independant research projects by districts, universities, or other agencies. You can contact the state of Washington if you are interested.

I think there have been some interesting uses of the data in Washington. One is that the state board has increased course requirements to promote better planning by students. The state found that even the better students were not laying out appropriate plans given the college or occupational plans they reported. For example, one-third of the students who said they wanted to go into engineering in college were not planning to take calculus. The High School and Beyond data also affected the states decision to add eighth grade statewide testing. More recently the state has added High School and Beyond items to the 8th and 10th grade statewide assessments. Thus, now there is a student attitude supplement to the statewide achievement test. Participating districts will have both local and statewide data and district data on selected High School and Beyond survey items.

My involvement with High School and Beyond has been primarily at the local level. We have put together a scoring service so that districts can administer the High School and Beyond survey and we at the Northwest Regional Educational Laboratory will analyze those results and provide summary reports. The district administers the survey, which is printed as a reusable booklet. Students take about 30 minutes to respond to the 130 questions on the survey. The district sends the answer sheets to us, we score the answer sheets and provide reports. The reports show the responses to each item and a series of cross tabulations compare two variables. For instance, some districts were interested in sex differences, so key items were crosstabulated by sex. Other districts requested crosstabulations on student performance variables like grades and homework. We also send an interpretation guide which includes, for each item, the state and national breakdown of student responses. So here we have comparative data from both Washington and the nation.

Many of the districts that are using this service now are involved in the Onward to Excellence (OTE) program. As part of the OTE school improvement process, schools annually develop profiles to help target weak areas needing imporvement. They are using selected items from the survey to do this. As Oregon districts get further along in trying to come up with school profiles as directed by state requirements, they will find the database useful as well. A few districts are trying to evaluate specific programs like one

district here in Oregon that wanted to take a look at its counseling program. They selected certain items that reflected the kind of help counselors were giving students and student's reports about how helpful the counselors were. Other districts using our scoring service simply want to take the pulse of the district, to see how well they are doing.

A couple districts, Seattle Public Schools, for instance, have also used the freshman/sophomore surveys heavily. This survey is more useful in counseling individuals or small groups early in their schooling, rather than program evaluation.

Let me show you the school profiles from two schools involved in the Onward to Excellence process. In the first transparency, the question is: Should there be more emphasis on basic academic subjects? The percent of students responding positively to the question in this school was quite different from the results for both Washington and the nation, but the percentage did decrease across years. This finding was used in goal setting for the program improvement project and the results suggest that there was some impact of the program efforts.

The other school was interested in "what factors interferred with your education." As the transparency shows, they found poor study habits were something that the students were concerned about.

One thing I really remark about the data is how close many of these schools are to the national results. I expected much more variation across schools and less stability in the data across years, that would make the data more difficult to interpret. That is not what I have been finding. Where there are differences, there is usually a good reason for those differences.

Let me summarize the benefits and problems with using the High School and Beyond survey to create a database. On the positive side, the High School and Beyond data supplies a wealth of information about student plans and activities that is a supplement to achievement data. Educators have trouble finding good measure or indicators at the secondary level beyond test scores and dropout rates.

The survey provides comparative data, national, state or local results from previous years, with which to put the student responses in context. You must have some basis for interpreting the numbers, they are not very informative otherwise. The lack of comparative data will be a problem for Oregon districts as they begin to build and try to interpret school profiles. Without data from other districts or data from several years, it is difficult to interpret most indicators, to know what is a high or low value. This is true in any discipline, not just education.

On the negative side, these are self-report data. NCES has supported national studies that show that the student responses to these items are suprisingly valid. However, there are limits to what you can show with student self-report data. I think that we want to include additional measures for a more complete set of indicators in our profiles. Also, keep in mind that the comparative data being used now is based on the 1980 original survey and so it is getting a little out of date.

The Feasibility of Regional Databases

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Presented at the conference on "Using Data and Information Systems to Support School Improvement and Accountability," October 31, 1985.

Introduction

The information in this presentation is the result of discussions of a working group of representatives of major information system centers in the Northwest Regional Educational Laboratory (NWREL) region. The group was convened to consider the feasibility of regional databases. The dictionary definition of feasibility indicates a practical interpretation. That is, a feasible activity is capable of being accomplished, is practicable, suitable, or logical. The discussion focussed on those issues of practicality, after the group first dealt with characteristics of databases and reached consensus on a definition.

What is a Database?

A database is a useful collection of data which:

- has a purpose;
- is organized;
- is valid and reliable;
- is accessible

A database is useful when it answers the questions people ask. It is certainly possible to identify information that is regional in nature (that is, it will transcend state boundaries), and it could be collected and organized. However, if it is to answer questions, we need to answer other questions such as who will ask for information, why will they ask, and what data needs to be present.

Who will ask? The following list shows some of the client groups in the Northwest states who possible have common interests in certain kinds of data.

Chief State School Officers
SEA staff members
Regional Centers or Co-ops
School district staff
Boards of Education
Professional Organizations
Higher Education Systems
Legislators
Governors and staffs
Lobbying Groups
Private sector--publishers, photographers, etc.

Why will they ask? The major reasons identified by conferees for queries answerable by regional information can be grouped in three categories: comparability, planning, and justification.

a. Comparability--school districts, state agencies and other organizations frequently wish to compare themselves with other agencies of the same type and size, particularly in the areas of budget and policy. Some maintain a phone list of comparable agencies, polling them as needed.

b. Planning--many agencies need to look at their own planning in terms of regional trends.

c. Justification--most education agencies need data to "build a case" for proposals to boards, legislative commitees, and the public.

What questions will be asked? A number of different categories of information were identified as the subject of inquiries to data centers in the region. A sample of these is below:

Student retention	Policies
Teacher supply and demand	Budgets
Certification	Curriculum
Teacher assignment	Goals, Objectives
Student assessment	Nonschool data
Teacher/Student ratio	Tax
Information sources	Income
Studies and reports	Population

The Common Core Data (CCD) is a database provided by states to the National Center for Educational Statistics (NCES) each year. Some of the above data is included, and can provide a good start at a regional database. Subsets of the national collection can be obtained by state and region.

Validity and Reliability

Attaining these characteristics in a regional database could be difficult. The larger the area covered and the larger the scope of data, the more difficult is the task. However, some steps to achieve higher degrees of validity and reliability can be identified.

a. Achieve common definitions of terms--many terms in the education field acquire a variety of meanings. The terms Basic Education, Dropout and Middle School are examples. Sometimes meanings are arbitrary numbers or levels set by boards or are defined in laws or policies.

b. Insure complete participation--a database drawn from many agencies is as complete as the degree of participation of the agencies. The regularity of both contribution to and use of data affects validity and reliability. The dedication to detail of the contributor also is important.

c. Insure currency--frequent and continuous update, on a regular and prompt basis, is important. In a comprehensive database, there will be great variety in the periodicity of reporting data items, ranging from monthly to yearly.

d. Establish good management and liaison--continuous contact with the contributing agencies is required to carry out the previous steps and maintain the efforts.

Accessibility

The characteristics of good accessibility were identified as being direct, achieving timely response, ease of requesting information and ease of update. A major characteristic is the ability of a database system to respond to a reasonable ad hoc request. Many computer-based systems have standard reports but do not support easy retrieval of information in any other fashion.

Implementation--databases are typically collected and stored either on paper or in computers. Sometimes paper systems are more accessible than computers. However, the larger and more complex the database, the more difficult is the paper method.

Location--a database does not necessarily need to be in one file or one computer. A regional database might be conceived of as a collection of databases in each state, with access enhanced by telecommunications systems. In the NWREL region some major databases exist in computerized form. The following organizations are examples:

Oregon Total Information System (OTIS)
Washington ESD Consortium
Idaho Department of Education (SEPARS)

Cost--cost factors such as affordability, cost worthiness and cost effectiveness affect access. If agencies can't afford it, they won't access it.

Conclusions

Most conferences agreed that a regional database is probably feasible. That is, it is possible to obtain data, organize it, provide access, and maintain reasonable validity and reliability. The question of cost, particularly affordability, needs further research. While a center like OTIS currently serves its clients with similar services in an affordable fashion, it is not clear how much a region-wide service would cost and whether education agencies would pay the cost.

Using Data Systems to Support a District's Evaluation and Improvement Efforts

William Cooley
University of Pittsburgh

I work at a research and development center at a university. Maybe I had better say that I am paid by an R & D center at a university. I work for the Pittsburgh Public Schools. NIE, in its wisdom, gave us funds to support a lot of different kinds of learning research. What I chose to do with my share of that is to use the Pittsburgh Public Schools as the laboratory in which I explored what district-based R & D efforts--at least research/testing/evaluation enterprises--might do to be more responsive to the needs for information on the part of school board superintendents, managers of schools, teachers, etc.

Bill Bickel and I started this work in 1978, and we have been at it ever since. The big change came in 1980. We got a new superintendent of schools, Richard Wallace, and he is a very data-oriented superintendent. He looked around. He noticed he didn't have a research office. He found us across the street, and we started working very intensively with him. Now we have a book coming out next month, entitled Decision-Oriented Education Research, to be published by Kluwer-Niejhoff The book is about how to do district research, evaluation and testing. Now, there are other people who are doing it as well as we were, but they don't have the advantage of extra resources to reflect on it, to write about it, to tell the others what they are doing. We have had the luxury of being able to reflect on that, and also to document our reflections. We have been able to actually study the use that the district made of whatever information we produced.

We have 11 case histories: What did the district ask us to do? What did we do? What happened? How did we go about doing it? What did we learn? What did the district do with what we learned? Then we went across these case histories and tried to generalize. The generalizations included things like what client orientation is all about, why it is critical, and how to keep from "being used" in your anxiousness to be useful, which is an important distinction. So what we did was develop notions about "client orientation", notions about the importance of being methodlogically eclectic, notions about formative--that is, improvement-oriented--studies rather than summative ones. I get very uneasy, as I did yesterday, when all of the emphasis is on summative evaluation. Laying on yardsticks to pass judgement over what must be going on--that tends not to be too useful as people try to figure out how to make things better. So our emphasis is very much formative in nature. Larry Barber apparently has just come out with another one of his rash statements in which he has "proven" that formative evaluators tend to be optimists and summative evaluators tend to be pessimists. I like it. It does bring out the optimist in me, as we seek to figure out how to make a messy situation more workable. So, that's what Decision-Oriented Educational Research is all about.

One point we make--and this won't be new to you folks--is that most of the effort people make to generate information which others in the district will find useful is in putting together the data that are likely to shed light on some issue. And since these issues have a way of changing very quickly, you have to be timely. If you set out to do a two-year study every time the board has a need to understand something, you're not going to make it in this business. Now you all know that, but what we did was to try to figure out what to do about it. Clearly, one aspect is to put together an information system that allows you to have the kinds of data that are needed for most questions that come up, but have to be massaged in different ways to guide the dialogue as a board deliberates, or guide the manager who is trying to set priorities. So we have been figuring out what such information systems might look like. That's my current distraction.

The district has a central computer--the main frame that sits in the central office. The district has grand ambitions in terms of using the computer to serve people in the schools. It's had this computer for five years, and it never gets to the part about serving people in the schools, because it's distracted with central office concerns. The guy down the hall has to get out the payroll, or the bus schedule has to get worked out. Noticing that, we began to think about what might be an alternative, and we began to get interested in this thing called distributed processing. But another event in the district also propelled me into looking at local school information systems based on a microcomputer. That phenomenon is the principal's function as an instructional leader--the pressures on principals to be well-informed about instruction in the schools, to produce high scores on achievement tests, etc. With these pressures, we began to notice some very weird things happening with the indicator called the California Achievement Test. That's another interesting thing about indicators: they are easily corrupted, especially when used for summative evaluation. So I was asked to talk about why I didn't think achievement tests were a good idea for evaluating principals, and I laid out some things. What we had to do was to help the board see why they shouldn't fire a principal if the CAT scores were low, why they might start to get strange looking miracles in certain schools, and what it means to administer standardized tests in nonstandard ways. So we asked some questions, particularly the second one, Do principals have adequate resources to monitor and correct ineffective teaching? (See page 3 of the attachment to this presentation.) The answer was a clear no. They had mounted a number of important innovations in the district. There is in fact in this current issue of Educational Leadership a nice article by Paul LeMachieu on Monitoring Achievement in Pittsburgh (MAP), which is our criterion referenced testing system.

As I began to think about the principals' needs for information, I began asking them what they were getting out of the central computer. And they said well, about the only thing we get now are memos from central office at the speed of light. And so, electronic mail was the one thing that they noticed,but they were not getting any help in putting all this stuff together. So we began to think about how principals might implement the instructional leadership function. What can a principal manage? Well, the principal manages the schedule, grouping, staff development, staff deployment, learning resources (page 1 of the attachment). Those are some of the manipulable things. We also looked at the constraints--and there are a lot of them--all the way from school board politics, state code, local conventions,

AFT, the union regs, etc. Then we asked, what are the options, what are the restraints, what kinds of things might they monitor? And we came up with this familiar list (page 2). And we began to notice that, without too much trouble, we could get a lot of this in one place, making it possible for the principal to look across students and across classrooms and monitor indicators in a way that allows for corrective action.

That's my enthusiasm for indicators. I think the most important function of indicators is to look at indications of outliers or trends or whatever, but have the next step be conceivable, be possible, be implementable--we call them "action systems." It's the old cybernectic model. You notice that something isn't the way you would like it to be, and you have procedures that can be used to follow up. Those procedures are necessarily diagnostic, because it's never clear from the indicator just what the problem is. All it tells you is that maybe there is something you might want to look into. So, we had this model of indicators as guiding corrective feedback--a formative orientation. We had the notion that principals needed more help. And we began to design a system a little over a year ago. We called it Computer-Assisted Principal--CAP. We put a lot of effort into designing a nice, pretty logo to look at on the monitor, but we began to notice that a lot of other people besides the principal were using it. So in order to save the logo, we call it Computer-Assisted Professional. (See page 4 of the attachment to this presentation.) It is designed to be used in the school, by the people in the school, for the people in the school--their very own data base management system.

Now you may ask, what does this have to do with the notion you started out with--that if you are going to get good data centrally, something has to be different. Well, the only way I know of having good clean data--data that are reliable, valid and so on--is to have people looking at those data every day, using them, and caring for them. The way to get that behavior is to build incentives for them to use the data, to get data in there, and to get information out. If people are using the data every day in the trenches, then summaries of those data can be passed up to the district and used for planning, etc. I am a very much of a bottom-upper, as you may tell from the way I am talking. I think it's obvious that certain functions have to be done at the state, but I get very upset when the state gets involved in monitoring student level achievement and is not noticing that 10 percent of the 500 school districts in Pennsylvania are going bankrupt. There are certain things that they might monitor--things that they can do something about--and that is the point. You monitor the things you can do something about. If you monitor those things that are your responsibility, you don't monitor the ones that are somebody else's responsibility. That's what we are trying to figure out--whatis the principal's responsibility? What is the social worker's responsibility? What is the teacher's responsibility? Then, we try to make displays of data that are useful to them as they think about where they are and where they are going.

We designed this thing with some goals in mind, starting with very general ones. We deliberately set out to work on these three goals (page 5 of the attachment).

You all know about the first one. One of the things that makes elementary school life so difficult is the restriction of the schedule--the inflexibility of the thing. So, one of the ways in which a microcomputer can enhance the quality of life is through making life a little more flexible. In terms of equity issues, one of the very important functions that this system is performing is in improving communications between home and school. That is very much related to the issues of truancy, and we have become aware of a lot of reasons for kids not being in school that have nothing to do with their attitude about school. We thought about goals for the system, and we thought about functions. One of the things we looked at was the district's Monitoring Achievement in Pittsburgh (MAP), their criterion referenced testing system, which is a period testing system. The district issues tests four to six times a year in each of four or five subject areas. Those tests are administered, collected centrally, scored centrally, and, if everything goes well, in two weeks they are back in the classroom with a report. What we noticed was that if we put a desk top computer onto an XT, we could have the scores that same day. So, one thing that we built into this thing from the beginning is the ability to score tests. If you think about these microsystems simply as scoring devices, which they can very easily be now with the fairly economicaldesk top scanner, that opens up a whole lot of possibilities for entering data. A big problem in these microsystems is figuring out how to enter the data. One way is to score tests and to do attendance accounting. We do both of those. We also designed our own attendance system and have it operating on a daily basis with daily reports. Then there are the obvious functions of record keeping, record retrieval, report generating, and so forth. I could tell you stories about how each of these works, but bottom line for me is getting corrective feedback--organizing these data in ways that suggest next steps, or at least the possibilities for next steps. That's where we are trying to go with this system.

Now, given the goals and given the kinds of functions we want to perform, what would it require? (See page 7 of the attachment.) We thought about this and made some decisions. We wanted to build on the fact that, today, you can buy very exciting packages for managing data bases. A year ago September, we looked at the 64 data base packages available for DOS . The one we picked was particularly exciting, because it has both the procedural language--that is, you can easily write programs that generate menus and make a very user-friendly system--and is as open ended, which means that any inquirer can make any ad hoc inquiry--a capability we have found to be extremely important. We went with a relational data base management software called 'Knowledge Manager'--called it 'K-Man' for short--and it is an excellent piece of software. We also knew that we wanted to get data into and out of the system very easily. So we went with the Hayes telecommunication software and internal modem, and that has proven to be extremely valuable. When the standardized test results come from the California Achievement Tests to the district's central computer, the files are downloaded for that school and they are off and running with the test data--not the way they were organized when the kids took the tests last spring, but according to the way kids are currently organized in the school. We wanted to be able to import data from the scanner, so that defined certain conditions. We wanted it to be menu driven, and that helped us define what data base system we wanted. We wanted graphics displays. I am a great believer in the notion that 'one picture is worth 10,000 numbers' and I think that that was a good choice. You spend a little bit more for graphics, but it is well worth it. You also buy color ,

which is really kind of fun. We also noticed that the district wanted to send letters home, pulling data out of the computer, and including them in individually tailored letters for each parent. The first time we did it, it was a 12-hour run, and we quickly upped the priority for fast printers. And though we didn't start out to build a system, what was available just didn't make any sense, so we moved quickly to the hard disk and we think that that was an extremely important decision. The success problem is interesting: at first, we were wondering whether anyone was using it, and now we are wondering how we are going to handle the queue, and so we are starting to look at ways of solving that.

Essentially, we are talking about building a school-based information system on an XT-like device at a school, for a school, with the people in the school guiding its development. That latter is an extremely important point. We began with the largest elementary school in Pittsburgh last fall; it has over 800 students. It was a mess in terms of information. Nobody knew where anyone was. The first time we did an alphabetical listing of all the students in the school, the principal cried. It was just a whole new life, and it's so much fun to see them moving into the 20th century. We worked with them veryclosely. Last year in our development school, we worked primarily with the principal, the social worker, the front office, the vice principal--and the system took shape based upon that. Now the reason we worked with this group was that we knew we had to get their attention; we had to have them see that they could get more than they thought possible once they took the trouble to keep this thing current. So we started with central functions--the central office functions for that school. That proved to be a good idea; but we soon began to notice that we were making the same kind of errors that the folks at the central computer had been making--we found that focusing on management functions is not necessarily directly relevant to instruction.

This year we are in another school which Pittsburgh has just launched, called Brookline Teacher Center. Some of you may have heard of the Schenley Teacher Center; it has been written up a lot. If you haven't heard of it yet, you will. I think it is a remarkable staff development effort. We took one of our high schools, closed it down, and reopened it with the best secondary teachers in the district. At any given moment, five percent of the teachers are in the Schenley Teacher Center for intensive two-month inservice. The Schenley Teacher Center is a remarkable effort in a district determined to mount an intensive effort at staff development. They are now setting up a comparable center for the elementary schools, called Brookline. We are there in an environment with three times the teachers normally assigned to an elementary school. That is exciting, because you can finally talk to teachers during school--and that is unheard of. We have worked with them since September, and we are getting ideas from them about what this system might do. One of the things I am noticing is that the special teachers--such as the speech teacher, who deals with 50 of the 500 students in the school--want to build their own little data bases. That is, we are noticing what they want, trying to deliver it, and then observing what they do with it.

What I think I will do is go through a couple of the menus just to give you the flavor of it. The main menu (page 8 of the attachment) indicates that one of the things you can do in this system is monitor achievement at the student level. You can also monitor achievement at the classroom level. Classroom management data are very useful when the third grade teachers want to sit down and talk about what is happening in third grade reading. And we

have data on student home room and home data--that file was established immediately by down-loading everything the central computer had on kids' backgrounds. The data in central computers have tended to focus on demographics, because central office staff have been concerned with such things as student socio-economic status. That kind of thing was down-loaded quite easily from the central computer, and it provided that data base. There is information on staff schedules, which in this particular setting of the Brookline Teacher Center, is important because of their need to schedule teachers together for inservice.

Then there is my favorite, which is ad hoc inquiry. That is always a menu option, and it is part of the reason we bought into Knowledge Manager, "K-Man" for short. With K-Man, I can teach a teacher in ten minutes how to do an ad hoc inquiry. They need to know about five commands, and that's it. They can then do their own inquiries, generate their own reports with the data that they want to see together, and it is very easily learned. We use telecommunications when we are passing data from micro to micro, or from micro to central, or central to micro. Scoring tests involves not only scoring the math test, but also scoring teacher-made tests. When we score the math test, we capture the results, and it is immediately part of the student's record. Their aggregate is immediately part of the classroom record, and we also produce at that time the reports that the teachers and principals want. In addition to having it become part of the permanent record in the file, they produce immediate reports. Now, we score but we don't capture teacher-made tests because they are not very systematic. But we are trying to figure out what things might look like if they did want to capture and build up their own file.

Attendance accounting is a bread-and-butter kind of function. This is extremely important, because money and other things are at stake. We are doing that now, and this is the first time the district has had computer support for attendance accounting. It just hadn't been done. It was never possible to learn what was happening at the student level in attendance, and we now get a daily attendance report, a 20-day summary, and data on the worst cases--a list that goes automatically to the social worker so that priorities can be influenced by the worst and the toughest problems.

Let's say you picked student achievement monitoring after the main menu. It then reminds you that the files are structured by grade level, and you then indicate which grade level you want to look at (page 9). Let's say you pick fourth grade. Then it tells you what is available for fourth grade (page 10). Some of these are mysterious at first. For example, predefined reports, doesn't tell you much, except that you might guess that they are reports about student achievement monitoring that people want frequently. Then a menu follows it. It is a very easily learned tree structure. You have all seen them, so I won't go into it.

If you go to predefined reports or you're interested in noticing relationships between standardized tests and criterion referenced test results in ways that this last fall you just reassigned kids to home room based on last spring's CAT results. You know there is something funny as a result of the first math test in MAP. For the first criterion referenced test, you notice some discrepencies. You want to look at it more systematically and up on the screen comes a scatterplot for fourth grade CAT and MAP--this in terms

of standardized percentiles, this in terms of percent of items correct. (See page 11.) These are for the 70 some students who are in level four on the MAP test. What we are trying to do is find out if people in the schools really understand scatterplots? How do they feel about graphs? What kind of graphs make sense? How do you notice outliers, which is one of the things we are trying to get them to do. And outliers like this--we find that the people can pick that up very quickly.

Say you go to classroom achievement monitoring (page 12). As a part of fostering professionalism among teachers, one of the things the AFT is encouraging and we are encouraging is that teachers sit down and look at data together. It is amazing what occurs when a principal, teachers, the instructional leader, and maybe the math supervisor sit down and look at data together, try to figure out what the instructional implications are. The data can then inform the dialogue, which is all data really do well. They are helpful for getting some discussion going and for helping to clarify discussion. They don't make decisions. Thus, if the user picked option 4, under Classroom Achievement Monitoring, they would get a series of graphic displays that look like this. Now (see page 13), in this particular school there are three homerooms per grade level, and what we are showing for the first ten math objectives is the percent of the students in that classroom who have mastery on each particular objective. This is at the beginning of school. We are also capturing whether the objectives have been taught or not, because the pacing could be quite different from homeroom to homeroom. What we are getting the teachers to notice is whether the results say something about those particular kids, or about the teacher him/herself, or whether the results are common to all the homerooms, or if they point to a district-wide phenomenon that this particular objective is unusually difficult? Does it say something about the curriculum? You are trying to bring a lot of different data together to sort them out. The trick is to have a discussion with the teacher in question without getting that teacher all defensive. We are trying to get them to look at data that aren't summative, aren't being used to pass judgement. Instead, the group members are functioning like doctors who are looking at the X-ray and trying to figure out what to do. That is quite a different way of thinking about data than the approach people often have.

I am in a little hot water in the district for creating a demand for something on the part of 90 other schools. That is encouraging for us, but disconcerting for my collegues in the district who are stuck with the implementation of this. But they are now planning distributed processing in a very serious way, whereas they weren't before. And principals are corncerned because there is a great deal of pressure on them to do a lot of things. The superintendent is very determined to get principals aware of and involved in instructional planning, and they need data for it. They need to be informed. And they see this as a way of helping. So we will probably be working out a schedule of implementing this during the next year.

The King School, where we started last year, is a special case this year. We abandoned it. And it was deliberate. We developed the system there last year, got them well trained, and then said we were going to move on to Brookline where we have a chance to talk with the teachers and figure out how we might make a system useful for teachers. So we are now watching what is happening in the King School. We now notice that there are some problems. So far the main problems have been fights between the central guy, who said to the clerk, "You're not keeping my central computer current, you're spending

all your time on Cooley's computer, and you work for me." So we are trying figure out how to resolve some of those little problems. There is some anxiety on the part of the Central Office people as they begin to see that distributing information is also distributing other things--things such as power. We have got some very interesting problems to work out there. Also when you distribute information, distributed processing is also distributed technical headaches. We are keeping track of those things--the number of times it goes down because the paper jammed or because the power surge didn't work. We have had a couple failures. The questions are how often does it happen? What do you do about it? How do you handle backups? Things like that. It keeps us off the streets!

What can a principal manage?

Schedule

Grouping

Staff Development

Staff Deployment

Learning Resources

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What can a principal monitor?

Standardized Achievement Test Results

Curriculum Placement

Pacing

District Test Results

Curriculum Test Results

Attendance

Discipline Actions

Grades

Can a Principal be Accountable for Student Achievement?

- Can initial student differences be taken into account?

- Do principals have adequate resources to monitor and correct ineffective teaching?

- Can principals keep ineffective teachers out of their building?

- Do principals have adequate options for dealing with disruptive students?

Computer Assisted Professional

A school-based management information system developed by the Evaluation Unit at the Learning Research and Development Center

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What are the Goals?

Improve student achievement

Enhance quality of school life

Provide equal opportunity to learn

Current Functions

Test Scoring

Attendance Accounting

Record Keeping

Record Retrieval

Report Generating

Data Analysis

Corrective Feedback

System Requirements

Relational Data Base Management Software

Telecommunications Software

Import Data from Scanner

Menu Driven

Graphics Monitor

Fast Printer

Hard Disk

Allow for Multiple Users

CAP MAIN MENU

1. Student Achievement Monitoring
2. Classroom Achievement Monitoring
3. Student Homeroom and Home Data
4. Staff and Schedule Information
5. Ad Hoc Inquiries
6. Telecommunications
7. Scoring Tests
8. Attendance Accounting
9. Backup CAP Data Files

0. End CAP Session

Enter the Number of Your Choice: __

Which Grade Level Do You Want?

0. Kindergarten

1. First Grade

2. Second Grade

3. Third Grade

4. Fourth Grade

5. Fifth Grade

6. Special Education

7. Early Learning Skills

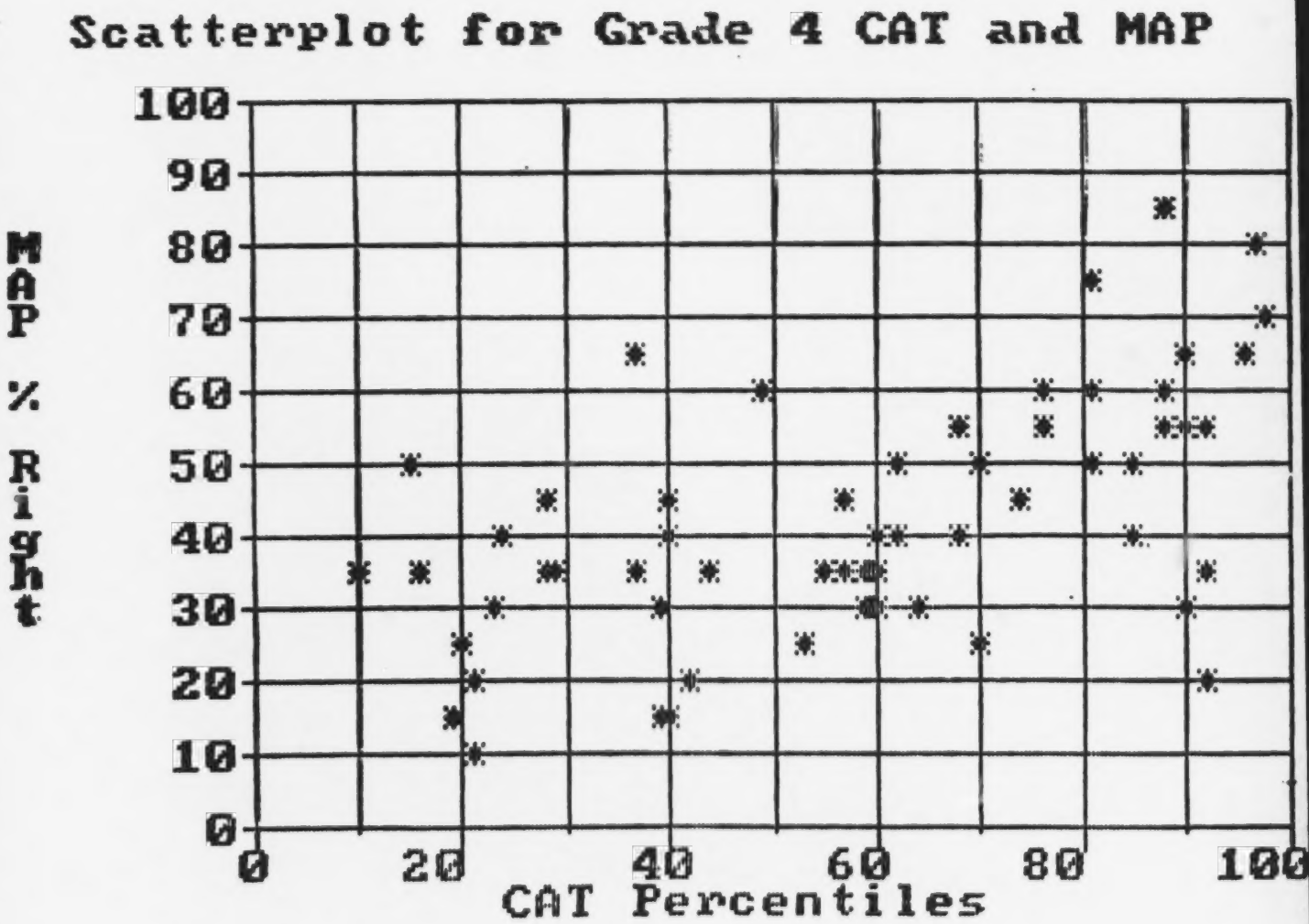
8. Demonstration Data

Enter Number of Desired Grade Level: __

Student Achievement Monitoring for Fourth Grade

1. Predefined Reports
2. Graphics Displays Created from MAP Data
3. Look at Individual Student Achievement Records
4. Look at Individual Student Reading Progress
5. Ad Hoc Inquiries
6. Edit Student Achievement Data
7. Choose Another Grade Level
0. Exit Back To Main Menu

Enter Number of Your Choice: __


Scatterplot for Grade 4 CAT and MAP
MAP % Right
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
CAT Percentiles

Classroom Achievement Monitoring

1. MAP Objectives Not Mastered

2. Graphics Displays Created from MAP Data

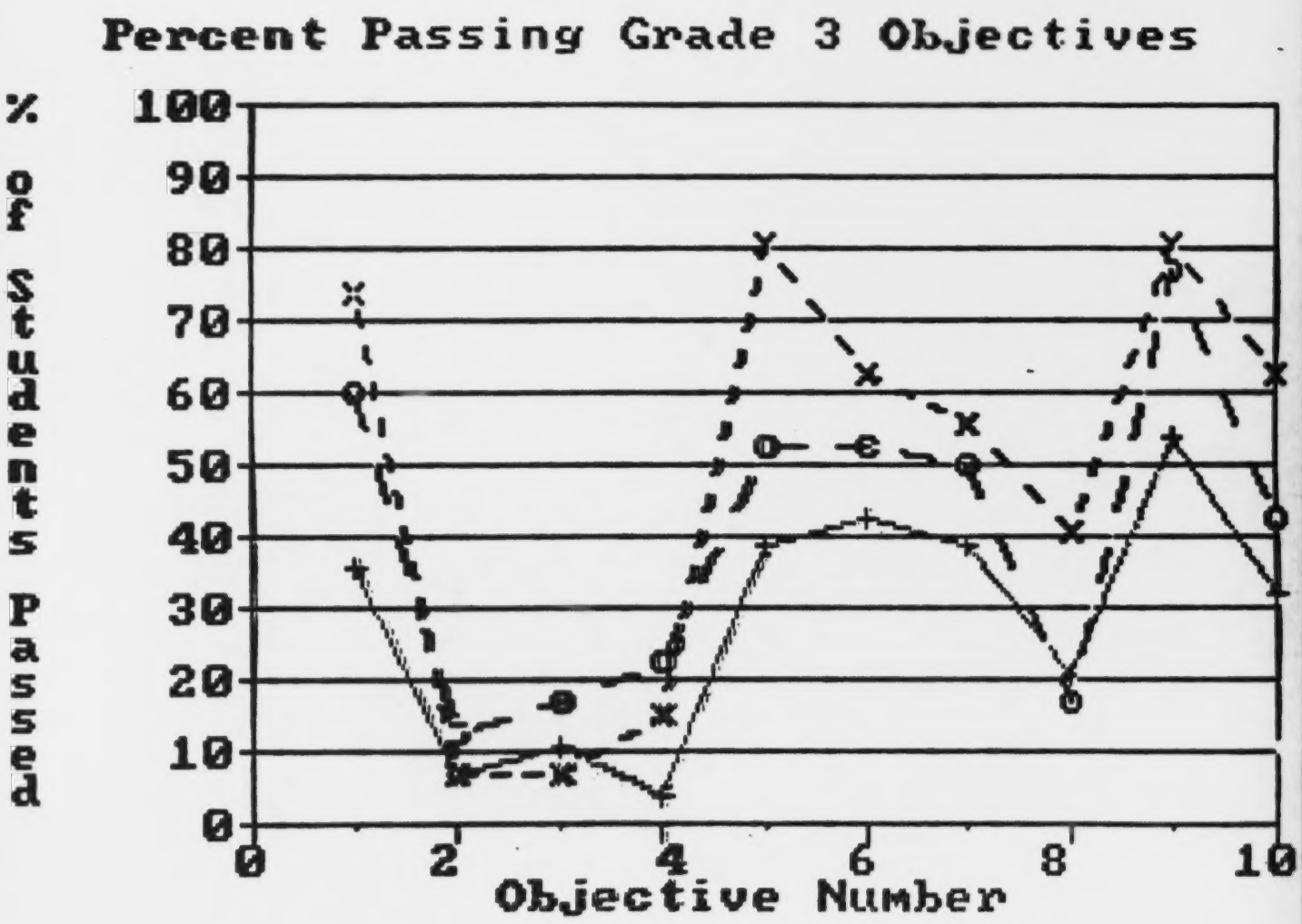
3. Look at Individual Classroom MAP Records

4. Percent of Students Passing Each MAP Objective

5. Ad Hoc Inquiries (KMAN Prompt)

0. Exit Back to Main Menu

Enter Number of Your Choice: __


Percent Passing Grade 3 Objectives
% of Students Passed
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
Objective Number

Profile Development and Goal Setting For School Improvement Leadership Teams

Bob Blum
Northwest Regional Educational Laboratory

I appreciate the opportunity to share a few ideas about what we've been doing with school improvement, particularly what we call profiling. I will describe two parts of what we do: developing a profile of student performance and setting improvement goals.

I always like to get my biases out early in a presentation. I heard a bias coming out at the end of the last presentation, something about the relative importance of State vs. others, and so on. Bias number one is that we are in the business of schooling to get all students to learn well. That's a very basic bottom line belief and I underscore all students and learning well. I'll define these concepts more specifically as we go along.

The second bias is that the primary purpose of student information, or student performance data, is to drive improvement. There are many other purposes: some additional purposes are being accountable and reporting to parents, but the primary purpose of student performance data is to drive improvement. A third bias is that improvement does not just happen. Someone must manage it. Someone has to initiate it, care for it, feed it, watch it, pat people on the back for doing it, and whatever else is necessary. Improvement has to be managed. It is the student performance data that provides the good information for the managers of improvement processes. In our work, the managers of improvement are called a leadership team. The team is a group composed of principal, selected teachers and someone from the central office. It nicely combines three levels: district, school, and classroom, to manage improvement in a single school.

A fourth bias is, and research supports this, that the school is the unit that has the best chance of getting improvement done. The classroom level is important, teachers have direct contact with students, and they can and do improve one at a time. The district is important because it can encourage, support and mandate improvement. The state is important because states establish requirements, encourage or require improvement, and provide resources. But the right level to get improvement done is the school. Schools have the right combination of people; have common interests--a mission--and have has access to the students. The school is where the action is.

A fifth bias is that the data base, a profile of student performance, should be broad rather than narrow. There should be many indicators rather than just one or two. It should not be focused only on basic skills achievement. We must look for indicators of many aspects of student performance. The advice we give schools as they create their own data bases is to collect information in at least three areas of student performance: academic achievement, social behavior and attitude. And when thinking about academic achievement, they should think broadly. Use standardized tests. Use information from teacher-made tests if they are well constructed and information can be collected systematically.

Collect information about reading, writing, and math; and collect information about social studies, science, art, physical education, and more. Collect information on higher level thinking and study skills. Think about collecting information on student performance in all skills.

When advising schools about creating a profile of student performance, we suggest that they think about a couple of terms that are used frequently, but not well defined: effectiveness and excellence. Effectiveness typically means that all of the students master basic priority objectives. The basic priority objectives usually mean that students do well on standardized criteria or norm-referenced tests of reading and math achievement. Excellence means that most students learn much more than the basic priority objectives in reading, math, and language arts. We suggest that schools think about higher level thinking skills and study skills. Think about students doing well in advanced placement courses and in all other subjects. Think about a whole range of indicators that go well beyond the very basic skills. Think about effectiveness and think about excellence. Decide what these terms mean to you in your school and/or school district. Think about the data you need to determine whether or not the students are learning well in basic areas and well beyond.

The sixth and final bias is that the easy part of profiling, or data base mangement, is getting the data together. The hard part is <u>getting it used</u> for the purposes intended: to drive school improvement. That's another bias.

Now, I want to talk about the document called a profile. It is the written description of student performance for a school. Schools develop their own profiles. They are all different--but all schools try it and they all get a profile developed. The quality of profile is from a very good to poor. The advice we give is the leadership team has the responsibility to develop the profile. Start with the data you have, and then add important types of information. We give schools a "profile contents menu" that includes indicators of student performance in the three areas I mentioned earlier, academic achievement, social behavior and attitude. We suggest that the leadership team go through the menu and check the kinds of information that they already have and decide how they will pull this information together. The teams then decide what additional information they want and how they will collect it. They have to decide what existing and new data will go into their profile.

We also advise schools on the character of the data. We suggest that what they need is school level data--school level, not classroom by classroom, not grade by grade, but schoolwide. School level data are needed to set schoolwide improvement goals. Everyone in the school is going to contribute to achieving the school improvement goal, so you want to see how well the school as a whole is doing. As improvement progresses, teachers, grades and departments need to see how well they're doing, but for goal setting, it is the <u>school level</u> data that is needed.

We suggest that the data be longitudinal. Get multi-year data when putting together information on standardized test scores. Look at indicators such as the percentage of kids in the top and bottom quartiles

over a multi-year period. The data should be aggregated to the school level, so you will see several years of data on percentage of students in each quartile of your school in the basic skills areas.

We also suggest that schools use the biggest numbers from the measure they use--total math, total language arts, total whatever. Use the big numbers. You want to create a picture of your whole school, using a few key indicators for how well the school is performing.

It is also important to disaggregate student performance data according to some criteria like socio-economic status of family, sex, or race. For example, you may want to look at percent in the lowest quartile and the highest quartile for the students who are on free and reduced lunch and for those who are not on free and reduced lunch. You may also want to look at similar data for boys and for girls. Some schools have had interesting findings. For instance, one school found that girls do consistently less well on most measures (SAT, grades in college, etc.) than boys do. The school can choose to ignore the finding, but they at least know the situation. Disaggregating data is important.

We also suggest that schools show district level, and perhaps state and national level data, along with their own. This provides a point of reference for schools to use in evaluating their own performance.

We advise showing data graphically as well as in chart form. Make it simple because all faculty members, and perhaps the community, will look it over. We also suggest that schools study the information carefully, and pull out the key facts that describe student performance, e.g., during the past three years the percentage of students in the top quartile has declined from 18-14 percent. These factual statements are called narratives and are included in the profile. The narrative must be simple and clear so that staff and others understand the facts and can make decisions based on the facts. The Leadership team writes several narratives based on the data they have, and goals are derived from the narratives.

I've been talking about getting the profile together. I call that the easy part, even though it takes a lot of time and energy. Different teams do it different ways. They split up the data and have various people work on parts. They have central office staff do some of the work. They scurry around and find all kinds of information, and they do a great job of developing their first profile. When the profile is completed, it belongs to the school, and they are fascinated by what they see and don't see within the informaton. But that's the easy part.

In most cases the hard part is getting the information used right. We've suggested a very structured approach to using the data to move from a broad set of indicators of school performance to one or two goals for improvement, one or two goals that all faculty agree upon. Getting agreement and "buy-in" is the <u>important part</u>. Goal setting brings people together on important improvements that they want to make.

The formalized process we suggest is one in which leadership teams start with their profile that includes data displays and narratives in the three areas of academic achievement, social behavior and attitude. They give the full profile to the faculty for review and analysis. The team pulls out the most important narratives and puts them onto a form so that the staff can analyze and evaluate current schoolwide results. They ask the group how they feel about the current results. Are you satisfied or dissatisfied with the various results as described in the narratives? How do you feel about the fact that the percentage of students in the top quartile decreased over five years? Is it important or not important? Are you satisfied or dissatisfied with this result?

The next question in the evaluation process relates to the relative importance of various results. Are the math test results more important than the attendance results to you at this time? Two questions: how satisfied, how important. The full faculty systematically analyzes and evaluates the narratives. They do this individually and in small groups. The leadership team takes the evaluation from the whole faculty, the concensus ratings that come out of small groups, and transforms factual narrative statements into preliminary goals. A preliminary goal might be to improve math achievement. If the faculty is very dissatisfied with results in math and think it's important, the leadership team transforms this into a preliminary goal. Take several preliminary goals back to the faculty for one more round of input. The outcome is one or two goals for improvement. Everyone has had a chance to be involved. The time has been made available, the group process happens and the school settles on one or two goals for improvement.

And that's the hard part--getting the data used to establish one or two goals for improvement in student performance. We suggest a very formal process. I have a hunch that when schools go through the process for the second or third time, they will modify and streamline it. But schools do need some formal process for engaging the whole faculty in analysis of current results and goal setting.

The Goal Based Education Program is primarily interested in school improvement. In the early going, we are willing to take a little less technical quality in collecting and displaying student performance data. Almost all the profiles are imperfect at first, although some of the schools now are doing a very, very good job. After a school goes through this once, they begin to improve their profile. They realize that their data is really not quite as good as it ought to be. They decide they need additional information. They realize that a particular graph isn't telling the story, or that something's too complicated. They initiate a process of improving the profile at the same time that they are improving their school. The school is in control. They are striving for school improvement. It is their data and they improve it over time.

To sum up, we believe that the school is the right level for improvement. The school needs a broad database on student performance, not just basic skills achievement. And it is critically important for the school to use their profile to engage the whole faculty in setting goals for improvement.

District Use of Data to Support School Improvement

Michael Brott
Central School District, Oregon

My primary focus is on monitoring student progress and on an evaluation system for this purpose. As a district we are working on the other areas of effective schools, particularly a coordinated curriculum, but for today's purposes we are not talking about those other areas of effective schools, even though they're very important.

We have a firm belief that the teacher is the center of the educational process. The teacher is a key decision maker within our goal directed/outcome based instructural program. The coordinated curriculum that is used is designed with high expectations for specific learning goals and objectives. The teacher has many decisions to make including developing the instructional plans and procedures to be used to foster goal attainment, plus assessment plans and procedures that monitor progress toward goal attainment.

Central School District is a member of the Valley Education Consortium, a consortium of small school districts in Marion, Polk and Yamhill Counties, working with Teaching Research from the Department of Higher Education, and OSU/WOSC. Through this consortium we have been able to develop goal directed/outcome based curriculum, with the corresponding assessment systems. A teacher can use the test item pool, which is a thick document containing test items in math, reading, science, or whatever is needed. Teachers can pull from the test item pool at any time to measure a particular goal or set of objectives. Feedback can be provided to students, parents, and the school administrator on how those students are progressing towards particular goals at any point in the student's learning.

I won't go through the rest of this diagram, but I'll be referring back to it at some point, I simply wanted you to know that this is the context from which the data we working with really comes.

Three Levels of Monitoring

We talk to our administrators about having three levels of monitoring. The first level is the one we all know about, the teacher level. We expect our teachers to monitor on a lesson-by-lesson basis, as all good teachers do. They'll ask questions, ask students to demonstrate or signal their understanding. These are things all of us who observe teachers see on a regular basis. Next, we know that teachers are going to be giving unit tests. They will use teacher-made unit tests, or textbook tests, or whatever they have available, to measure how well the students are progressing in a given unit of study. The third part of the teacher monitoring is the use of test item pool. This component of the teacher monitoring is not common. The teacher will use the test item pool to measure the skills and concepts that have been outlined in the goal based curriculum. The use of the test item pool is a key factor in determining progress towards mastery of the curriculum.

The principal is another important person in this process for school improvement. We expect our principals to be able to walk into the classroom on a formal or informal observation and be able to monitor the teacher in the process of monitoring an individual lesson, see that the teacher is using the instructional techniques that we know are effective, and to be able to gather data by asking questions. For example, if the principal sees a group of students working on literal comprehension in the back of the room, he will be able to come back to the teacher and say, "I notice that these children were working on literal comprehension. Can you tell me where that fits in your scope and sequence, where you are at this time?" Hopefully, the teacher can give that information and share with the principal where they are in the scope and sequence. This does two things; (1) It puts the principal in the position of setting an expectation for that particular teacher, that "I am concerned that you are teaching the district curriculum and you are moving towards the goals that we have agreed upon." (2) The principal generally will ask, "How well are the students in this group doing towards that goal?" The teacher has to be able to give specific information on the particular criterion referenced tests that they have used to show how those students have demonstrated mastery (or nonmastery) of that skill. It is very important for our principals, as well as, the teachers to know that this is happening at individual classroom level.

The second level is the building administrator level. We believe that each building should have individual student data, and the principal is the key to this occuring. We expect the principal to have individual student data readily available, not only for use by the principal, but for use by the individual teacher. We can use such information as [overhead of a test card is put on screen, see Appendix F]. This is a test we've used. We are about a year away from having all this data on the computer where we can have ready access to it. This is a fourth grader who came to us in the Fall and we have a Fall and Spring score shown on the top and bottom for fourth and fifth grades. We can begin to follow the progress of that particular student and see growth trends. The teachers can pull the cards on a particular group of children and see the profile of the members of that group and plan accordingly.

A second component of the monitoring system is what I call the watch list, and this is where we get some of our better improvement. We expect each of our buildings to identify the point at which students are going to be given additional assistance. A standard must be established for the data in order to raise a red flag that tells us we need to do some further work with a particular student. To give you an example, [referring to overhead transparency, shown at the end of this paper] if we take a set of 3rd grade scores ordered by reading, and looking down this list of reading scores, we can identify these two students who fall below the 30th percentile. This would be the first step in raising the red flag on a couple of students that may be put on the watch list. The school would then look at those students' individual test cards to see if this pattern was something that had occurred over time, or was just a one-time occurrence. The school would want to look at the criterion referenced tests and see what kind of scores the students had on the goal based tests to determine whether or not they had mastered the appropriate goals in reading and math. If the students were at the 50th percentile, less than the expected 80 percent mastery level, that would automatically qualify the students for the watch list.

This is a way for us to identify those students who have some academic difficulty. Once the students are identified, it becomes necessary to find out what those children know and what they don't know, on a specific basis. The school needs to know how well the students are doing in reading and it must use a finely tuned diagnostic system. When it is determined what the students know and don't know, the school proceeds to program planning. At the elementary or middle school, it is assumed that a student needs more than their regular program. Obviously, if the child is not at the level they should be, the school has to do something more than is provided in the regular program. The regular program is examined to make sure it fits what the child needs and then another program is designated for providing a double dose for that child, or a triple dose if necessary. The double dose program may be a Chapter 1 program in the school, if the child qualifies, or it may be a special ed mildly handicapped classroom, if that is indicated, or the school may need to simply put the child into a tutor program so that at some time during the day they are able to provide for an additional instructional period.

Frequent monitoring is the key. If the school is going to double dose that child, then every six to nine weeks it needs to do a quick assessment in those particular areas where the child was weak, because if there isn't twice the growth that would expected under normal circumstances, then the program isn't working. If the school is not getting that kind of growth then something is wrong and corrective action must be taken.

Those are the pieces we think need to be in place for the building principal monitoring program to be sure that kids aren't falling through the cracks. We monitor to make sure the program that we expect to be taught, is being taught, and that each child is making the progress that we think the child is capable of making.

The third level of the building administrator's monitoring system has to be classroom information. The principal needs standardized test data and criterion reference test data. Let me just share with you briefly what some of our classroom data looks like. [Overhead put up, see Appendix.]

Here is a set of fifth grade mathematics for our criterion referenced test. This is a comparison between mid-winter and spring and we're primarily interested in the gain scores. The essence of this data indicates that different teachers achieve different different results with each of the quartiles. Some teachers seem to work better with lower quartile students, while others work well with all students. A principal needs this data as a major part of his building monitoring system.

The third, and final, component of our monitoring system is the district level. The superintendent must have a comprehensive data package that includes standardized and criterion reference data for the district, school, and grade level.

The test results must be reported to the school board and public and form the foundation for program evaluation. The criterion reference tests provide the necessary data for determining the degree of mastery for the district required curriculum. [See Appendix.]

EFFECTIVE SCHOOLS HAVE . . .

HIGH EXPECTATIONS OF
STUDENTS AND EMPLOYEES

SCHOOL DISTRICT MISSION

UNIFORM: COORDINATED CURRICULUM

STUDENT EVALUATION
MONITORING SYSTEM

SAFE, ORDERLY CLIMATE
CONDUCIVE TO TEACHING AND LEARNING

PERFORMANCE-BASED EVALUATION
OF ALL EMPLOYEES

EFFECTIVE STAFF DEVELOPMENT
PROGRAM

SCHOOL IMPROVEMENT PLANS
BASED ON DATA

COMMUNICATION WITH EXTERNAL
COMMUNITY

PROVISION OF EQUITY FOR
STUDENTS AND STAFF

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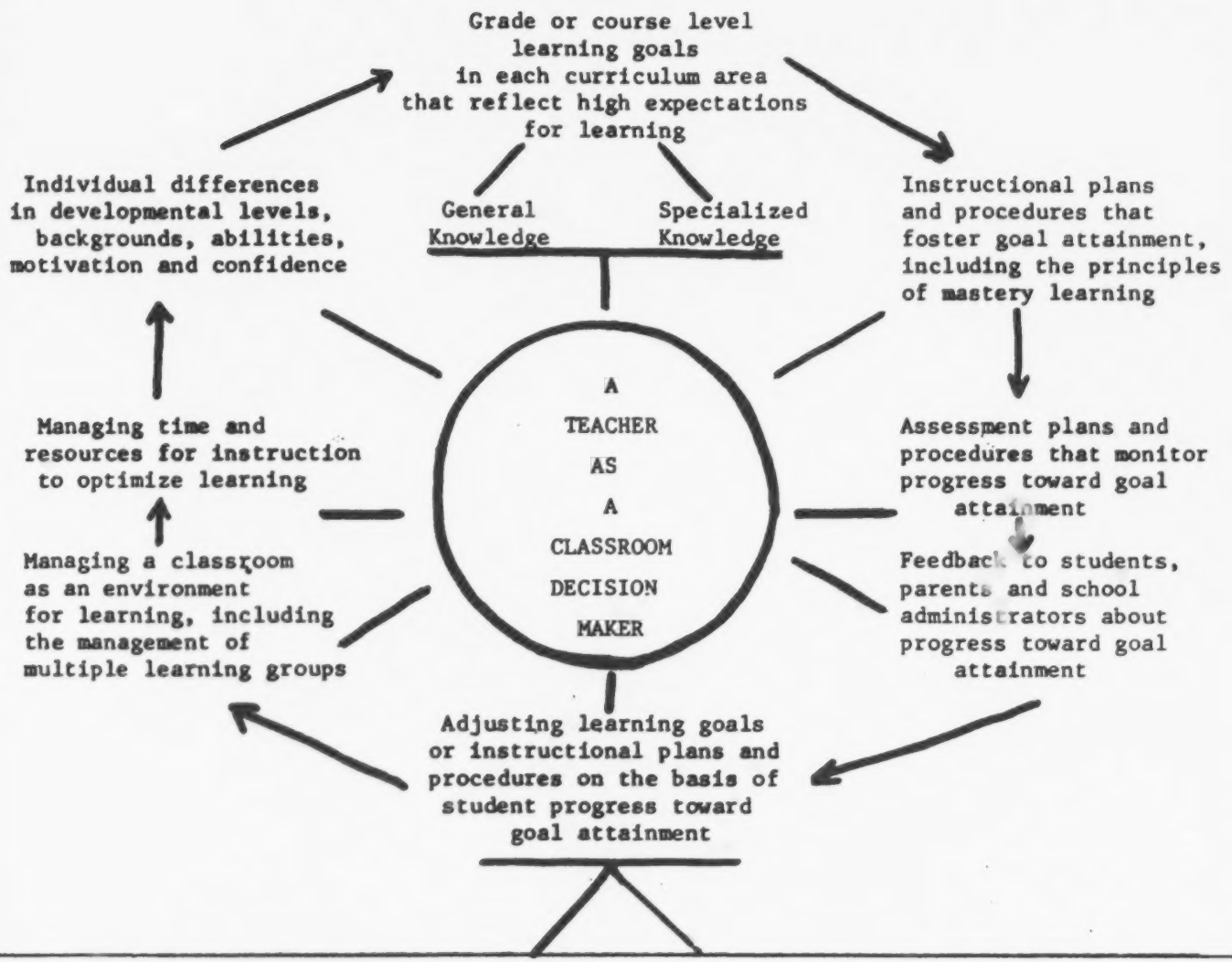
GOAL DIRECTED - OUTCOME BASED

INSTRUCTIONAL SYSTEM


Grade or course level learning goals in each curriculum area that reflect high expectations for learning
General Knowledge
Specialized Knowledge
Individual differences in developmental levels, backgrounds, abilities, motivation and confidence
Instructional plans and procedures that foster goal attainment, including the principles of mastery learning
A TEACHER AS A CLASSROOM DECISION MAKER
Managing time and resources for instruction to optimize learning
Assessment plans and procedures that monitor progress toward goal attainment
Managing a classroom as an environment for learning, including the management of multiple learning groups
Feedback to students, parents and school administrators about progress toward goal attainment
Adjusting learning goals or instructional plans and procedures on the basis of student progress toward goal attainment

ENHANCING ONE'S SCHOOL AS A PLACE TO WORK AND LEARN

District policies and state/federal regualtions	Building-level leadership Colleague exchange Administrative supervision	Instructional resources and support services	Program Evaluation Curriculum revision Troubleshooting

DISTRICT SUPPORT BASE

APPENDIX B

Spring INDIVIDUAL C.A.T. TEST CARD Name _____

		Reading			Language			Math		
CRD	YEAR	S.S.	%	G.E.	S.S.	%	G.E.	S.S.	%	G.E.
1										
2										
3										
4	79/80	743/760	82/81	7.7/8.2	648/727	56/77	5.2/7.4	712/727	87/91	6.4/7.6
5	80/81	787/799	88/84	9.6/10.2	731/762	78/80	7.5/8.8	752/778	94/92	8.5/10.0
6										

BEST COPY AVAILABLE

SS = Standard Score
% = Percentile
G.E.= Grade Equivalent

DATE 5/82

GRADE 3 RECORD

METROPOLITAN TEST

NAME	READING			MATH			LANGUAGE			BASIC BATTERY		
	SS	%	G.E.	SS	%	G.E.	SS	%	G.E.	SS	%	G.E.
Cristy	802	98	10.3	772	99	9.6	738	94	5.6	772	99	9.3
Chuck	778	96	9.1	748	98	8.4	712	88	6.8	738	98	8.0
Hal	760	94	8.2	709	96	7.0	857	99	INS	772	99	9.3
Mark	747	90	7.4	666	88	5.8	672	78	5.6	690	89	6.3
Daren	725	84	6.2	709	96	7.0	727	90	7.4	712	94	7.0
Beth	695	72	4.6	633	78	5.1	624	66	4.6	652	76	5.1
Marcy	690	70	4.4	671	92	6.3	624	66	4.6	660	78	5.3
Sonny	675	60	3.9	633	78	5.1	655	82	6.0	655	76	5.2
Tammara	664	52	3.5	616	72	4.7	727	90	7.4	650	74	5.0
Chris	664	52	3.5	488	20	2.6	489	23	2.4	562	36	3.0
Erick	661	50	3.4	588	86	3.2	648	72	5.1	599	52	3.7
Janet	654	48	3.3	562	48	3.7	612	62	4.3	602	52	3.8
Zack	647	44	3.1	654	86	5.6	672	78	5.6	636	68	4.6
Chad	638	40	2.9	770	99	9.6	557	42	3.3	620	60	4.2
Micky	618	30	2.6	479	18	2.5	579	50	3.7	548	28	2.5
Alice	588	18	2.3	449	10	2.2	529	32	2.8	511	16	2.3

FIFTH GRADE MATHEMATICS
DISTRICT A

Mark Schalock 5/6/85
For Discussion Only

DISTRICT A		Mid-Year Score	End-of-Year Score	Percent Gain Score	Average % * of Potential Gain Realized	Average NCE Standardized Test Score	Average Student Attitudes
Total District	(N = 128)	53.59%	63.13%	9.54%	21.94%	56.68	3.51
Top Quartile	(n = 31)	70.27%	82.06%	11.79%	38.42% **	77.03	4.03
Second	(n = 36)	56.19%	62.83%	6.64%	15.18%	53.78	3.81
Third	(n = 30)	48.86%	59.33%	10.47%	21.35%	52.07	3.20
Bottom	(n = 31)	38.47%	48.61%	10.14%	15.33%	43.74	2.97

Teacher attitudes toward the VEC Mathematics program = 38.92/60
Teacher implementation of the VEC Mathematics program = 20.05/ 36

140

* Average % of potential gain realized = $\frac{\text{(End-of-Year) - (Mid-Year)}}{\text{100\% -(Mid-Year)}}$

** These distributions represent patterns that are significantly different from what you would expect if the distribution of gains were equally distributed across all students. This is based on the Chi-Square Test; at the 0.05 level.

FIFTH GRADE MATHEMATICS
SCHOOL 1

CLASSROOM 1-A		Mid-Year Score	End-of-Year Score	Percent Gain Score	Average % of Potential Gain Realized	Average NCE Standardized Test Score	Average Student Attitudes
Total Classroom	(N = 17)	60.16%	71.77%	11.61%	27.41%	65.00	3.53
Top Quartile	(n = 4)	74.63%	79.35%	4.73%	16.98%	69.75	4.50
Second	(n = 5)	65.42%	74.94%	9.52%	28.18%	70.00	3.80
Third	(n = 4)	55.35%	69.65%	14.33%	31.28%	64.75	2.25
Bottom	(n = 4)	43.93%	62.33%	18.40%	33.03%	54.25	3.50

Teacher Attitudes toward the VEC Mathematics Program = 35
Teacher Implementation of the VEC Mathematics Program = 16

CLASSROOM 1-B							
Total Classroom	(N = 15)	52.37%	51.18%	-1.19%	0.62%	55.60	4.20
Top Quartile	(n = 4)	65.73%	75.33%	9.60%	28.80%	82.00	4.00
Second	(n = 4)	57.13%	52.68%	-4.45%	-10.00%	52.25	4.50
Third	(n = 3)	45.23%	40.80%	-4.43%	-7.23%	45.00	5.00
Bottom	(n = 4)	39.63%	33.33%	-6.30%	-11.05%	37.74	4.00

Teacher Attitudes toward the VEC Mathematics Program = 40
Teacher Implementation of the VEC Mathematics Program = 16

FIFTH GRADE MATHEMATICS
SCHOOL 2

CLASSROOM 2-A		Mid-Year Score	End-of-YEar Score	Percent Gain Score	Average % of Potential Gain Realized	Average NCE Standardized Test Score	Average Student Attitudes
Total Classroom	(N = 15)	62.95%	68.45%	5.50	15.72%	62.47	3.40
Top Quartile	(n = 4)	76.43%	86.00%	9.57%	39.83%	88.00	3.25
Second	(n = 4)	64.30%	62.65%	-1.65%	-3.95%	55.25	3.25
Third	(n = 3)	61.43%	70.67%	9.24%	23.87%	51.33	3.33
Bottom	(n = 4)	49.28%	55.03%	5.75%	5.18%	52.50	4.00

Teacher attitude towards the VEC Mathematics program = 50
Teacher implementation of the VEC Mathematics program = 19

CLASSROOM 2-B							
Total Classroom	(N = 16)	53.30%	66.76%	13.46%	31.23%	61.50	3.31
Top Quartile	(n = 4)	66.05%	82.00%	15.95%	49.08%	80.25	3.25
Second	(n = 4)	58.20%	68.68%	10.48%	24.93%	61.75	3.50
Third	(n = 4)	52.88%	66.70%	13.82%	29.73%	55.50	3.50
Bottom	(n = 4)	36.08%	49.68%	13.60%	21.18%	48.50	3.00

Teacher attitude towards the VEC Mathematics program = 38
Teacher implementation of the VEC Mathematics program = 19

FIFTH GRADE MATHEMATICS
SCHOOL 3

CLASSROOM 3-A		Mid-Year Score	End-of-Year Score	Average Gain Score	Average % of Potential Gain Realized	Average NCE Standardized Test Score	Average Student Attitudes
Total Classroom	(N = 14)	50.61%	70.24%	19.63%	40.76%	60.93	3.07
Top Quartile	(n = 3)	70.47%	85.33%	14.86%	49.47%	77.00	4.67
Second	(n = 4)	51.43%	69.08%	17.65%	36.50%	56.75	3.50
Third	(n = 4)	48.60%	69.33%	20.73%	40.30%	58.50	2.75
Bottom	(n = 3)	32.37%	57.90%	25.53%	38.23%	53.67	1.33

Teacher attitude towards the VEC Mathematics program = 27
Teacher implementation of the VEC Mathematics program = 26

CLASSROOM 3-B							
Total Classroom	(N = 13)	51.55%	63.86%	12.85%	27.85%	54.62	3.08
Top Quartile	(n = 3)	66.20%	85.33%	19.13%	55.80%	82.00	4.33
Second	(n = 4)	52.18%	58.03%	5.85%	12.10%	45.75	3.00
Third	(n = 3)	48.57%	67.33%	18.76%	36.33%	53.00	2.67
Bottom	(n = 3)	39.07%	46.70%	7.63%	12.46%	40.67	2.33

Teacher attitude towards the VEC Mathematics program = 42
Teacher implementation of the VEC Mathematics program = 26

A GOAL-BASED INSTRUCTIONAL PROGRAM

MAKES

A

DIFFERENCE

READING TOTAL

1981-82	District Mean	55th Percentile		
1984-85	District Mean	65th Percentile	Growth	10 Percentile Points

LANGUAGE TOTAL

1981-82	District Mean	54th Percentile		
1984-85	District Mean	65th Percentile	Growth	11 Percentile Points

SPELLING TOTAL

1981-82	District Mean	54th Percentile		
1984-85	District Mean	61st Percentile	Growth	7 Percentile Points

MATH TOTAL

1981-82	District Mean	53rd Percentile		
1984-85	District Mean	59th Percentile	Growth	6 Percentile Points

TABLE III
Summary of District CAT Scores

MATH PERCENTILES

Math Computation

Year	Grade 2	3	4	5	6	7	8	9	10
1981-82	—	50	49	52	—	50	51	51	52
1982-83	—	61	50	50	62	67	59	58	57
1983-84	—	46	56	56	57	62	57	58	61
1984-85	43	52	54	61	55	56	56	58	60

Math Concepts and Application

Year	Grade 2	3	4	5	6	7	8	9	10
1981-82	--	52	51	53	--	50	52	51	68
1982-83	—	57	55	55	55	60	56	59	57
1983-84	—	53	64	54	60	61	61	61	60
1984-85	54	62	65	71	56	61	64	65	62

Math Total

Year	Grade 2	3	4	5	6	7	8	9	10
1981-82	--	51	50	53	—	--	52	51	61
1982-83	—	61	52	50	58	64	59	60	58
1983-84	—	50	63	55	60	63	59	60	60
1984-85	49	57	60	66	57	59	61	62	61

Battery Total

Year	Grade 2	3	4	5	6	7	8	9	10
1983-84	--	55	66	60	64	66	62	61	62
1984-85	59	60	64	68	59	63	64	66	61

TABLE I

Summary of District CAT Scores

READING PERCENTILES

Reading Vocabulary

Year	Grade 2	3	4	5	6	7	8	9	10
1981-82	—	52	52	55	—	54	53	52	72
1982-83	—	58	53	54	56	64	61	60	61
1983-84	—	61	64	62	63	69	67	64	63
1984-85	61	61	64	65	60	64	64	64	61

Reading Comprehension

Year	Grade 2	3	4	5	6	7	8	9	10
1981-82	—	54	51	56	—	53	53	53	60
1982-83	—	53	56	57	56	66	56	58	61
1983-84	—	58	65	60	65	69	64	64	65
1984-85	62	64	65	67	59	64	69	70	64

Reading Total

Year	Grade 2	3	4	5	6	7	8	9	10
1981-82	—	53	52	56	—	53	53	53	66
1982-83	—	58	55	57	56	66	59	61	61
1983-84	—	64	65	62	64	69	66	65	64
1984-85	65	66	65	68	60	65	67	69	63

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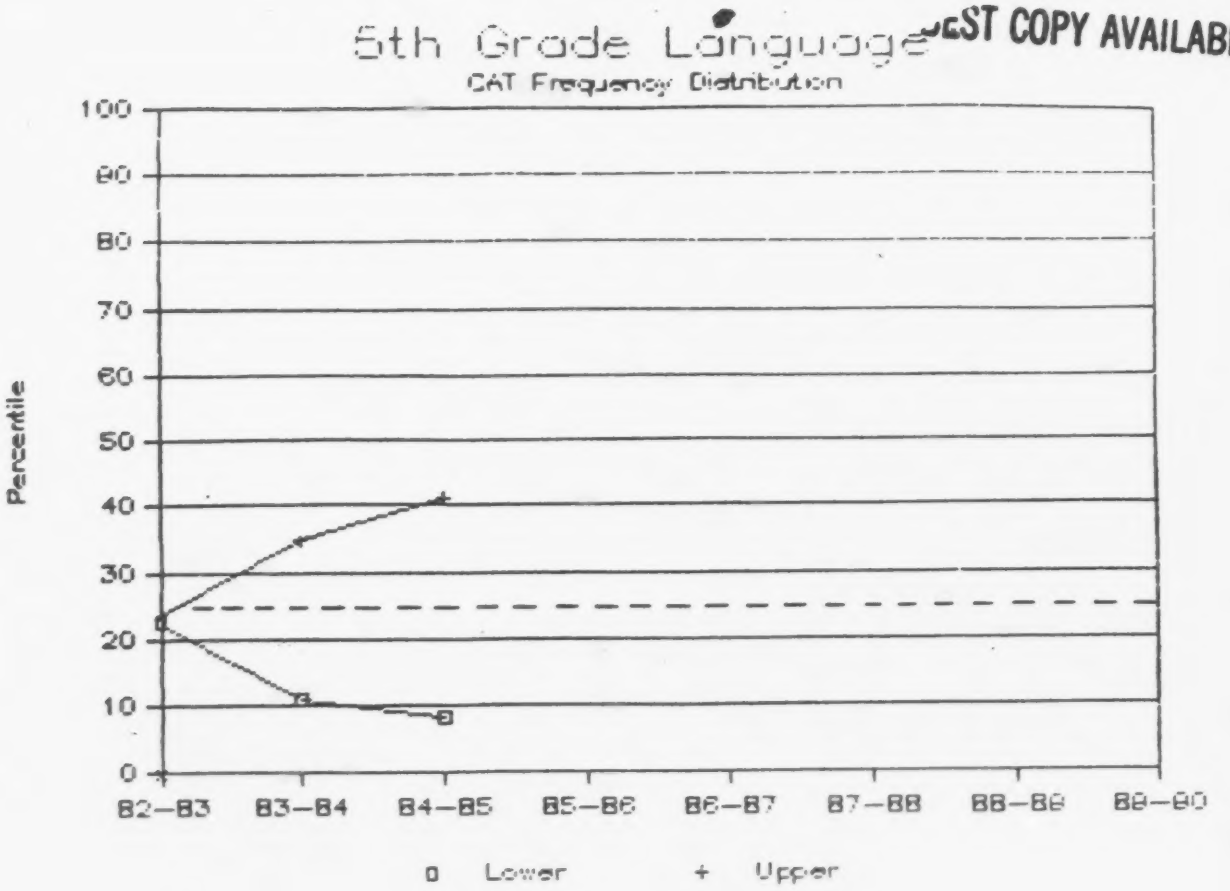
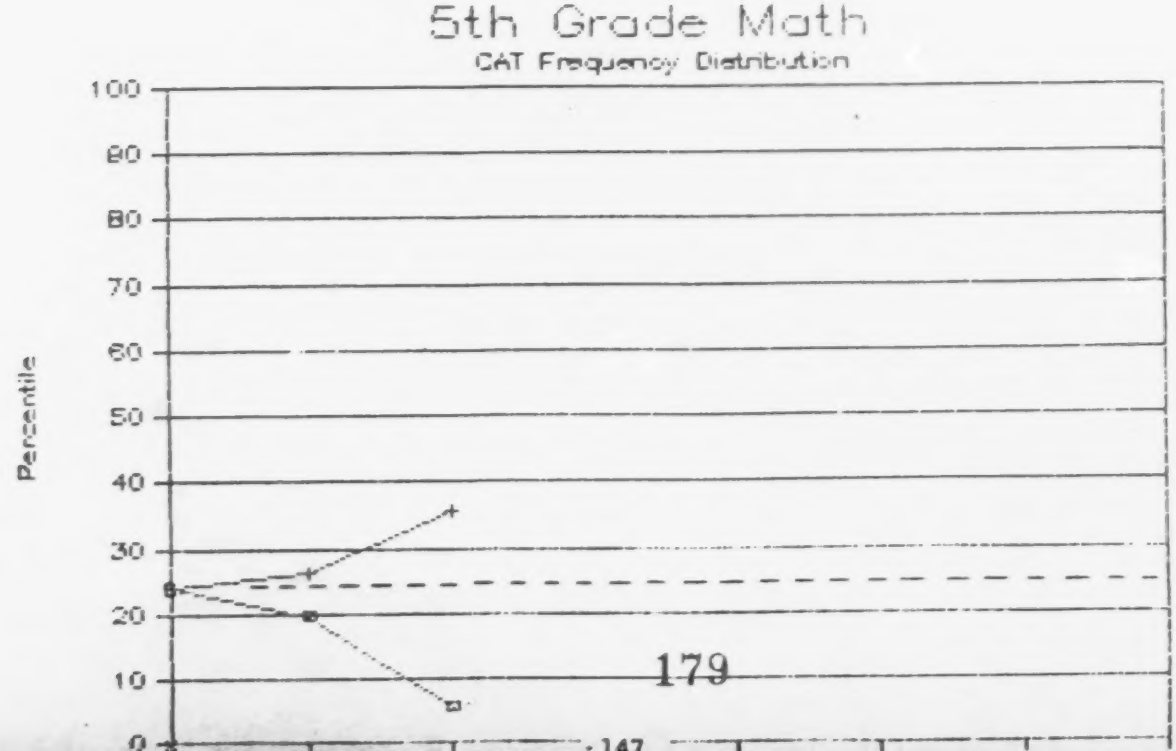
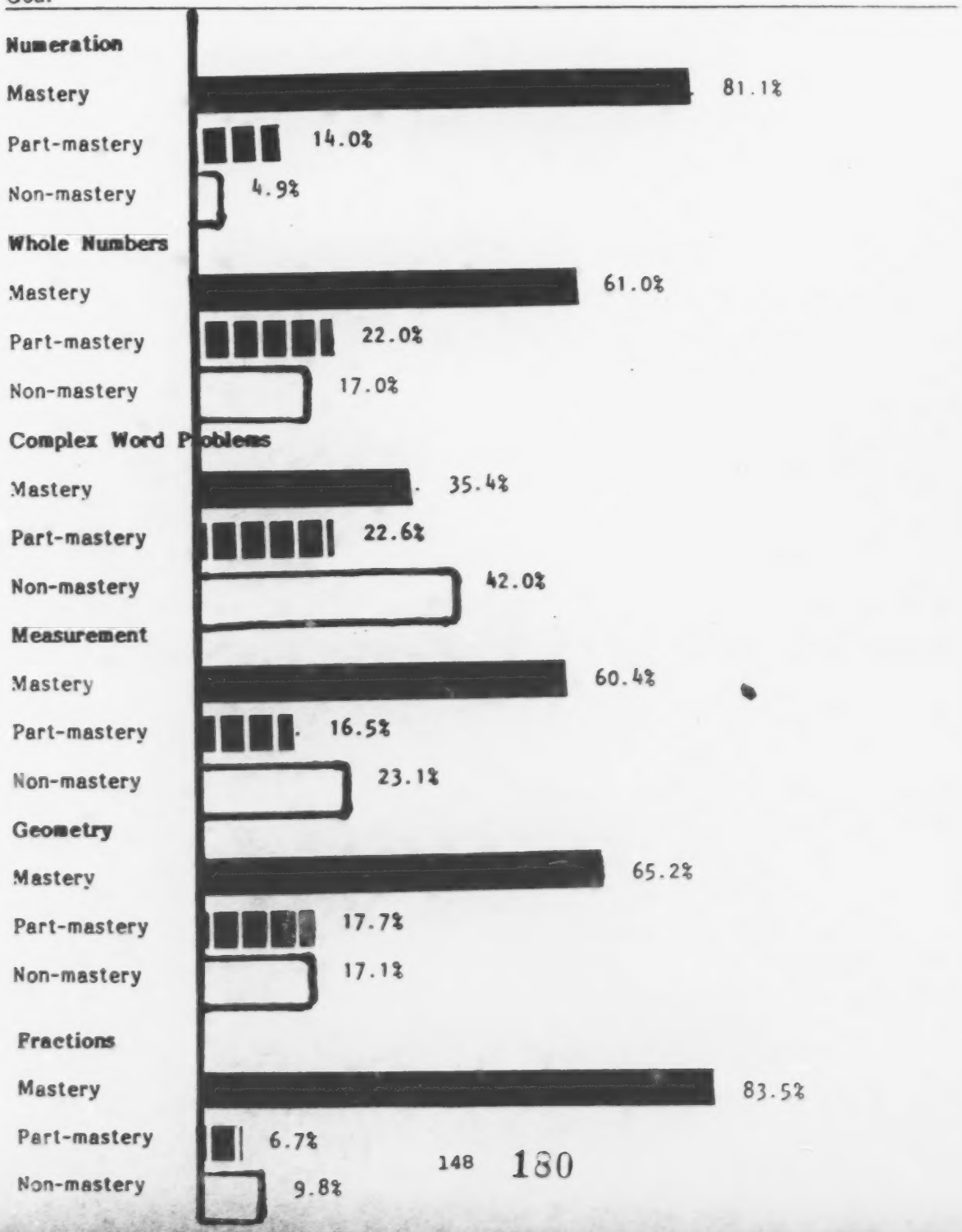


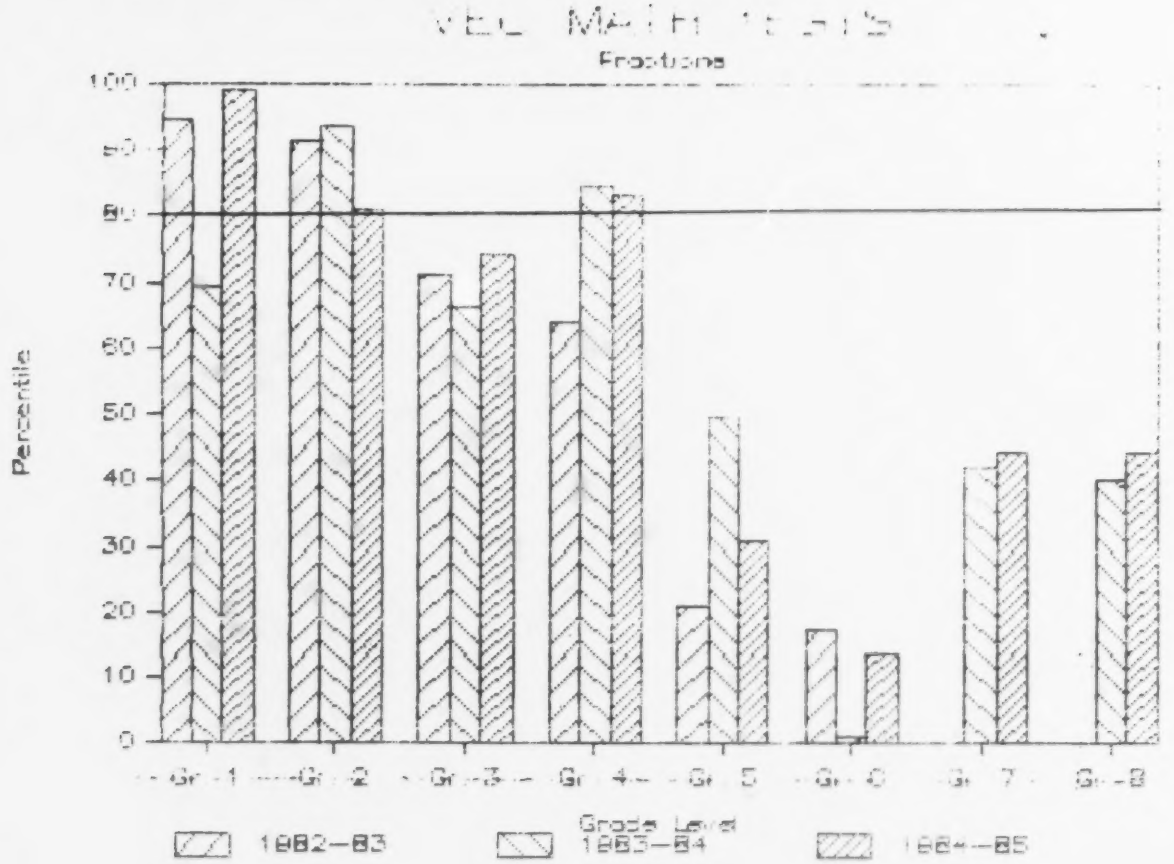


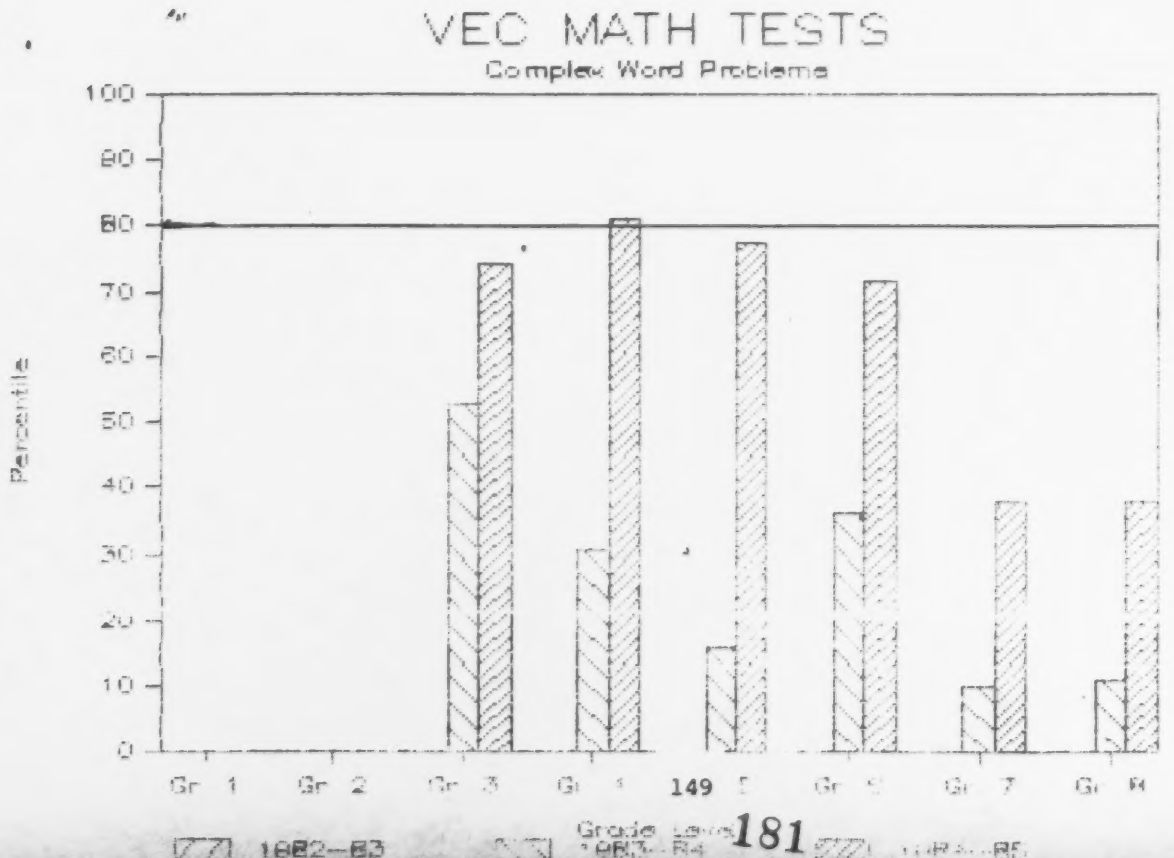
Central, 84-85

Grade Four

STUDENT MASTERY OF LEARNING GOALS WITHIN GRADE LEVELS







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District Use of Data To Support
Basic Skills Program Improvement

Bob Hammond
Springfield Public Schools

Springfield is a community of 40,000 people. We have approximately 9,000 students in fifteen elementary schools, four middle schools and two high schools

For the past seven years, the district has been at work developing ways to examine its basic skills instructional programs. One of several procedures developed allows us to monitor student performance from year to year using our standardized testing program.

In our district, standardized tests are administered in the fall and where needed, are followed up with individual diagnostic testing. Currently we have scores for grades 1 through 12 on the California Achievement Test.

From the assessment data provided by our standardized testing program, how do we locate problem areas to improve programs: We know from examining our district's average scores that our population's performance is generally similar to the national population on which the California Achievement Test was normed. Given this similarity, how far can our average scores vary from the national averages before we must conclude that there is a need for local program improvement? Also, how far can our average scores vary from one year to the next before we conclude that some aspect of a program is responsible for sporadic ups and downs?

District standards have been set which allow us to determine how far is "too far." The standards are based on standard acores and the normal curve concept--but before looking at these standards, let's take a look at the rationale behind them.

Judgments about performance are not made in a vacuum. Only by comparing two or more sets of data can we say anything about a group's relative achievement.

The most basic measure provided by any test is the raw score. On a test for third grade reading, there are 125 items, thus a gorup could theoretically obtain a raw score average from 0 to 125. The national average on this test is 80. For grade 4 reading, there are 127 items and scores could vary from 0 to 127. The national average on this test is 70. Obviously, a score of 70 in one year is not the same as a score of 70 in the next.

How can we compare the third grade's performance in one year with their next year's fourth grade performance? Also, what more can we conclude about the relationship between the district and the nation other

than noting a vague way that a score is above or below the national average? With raw scores, what do we have to compare?

Raw scores can be converted into another score which will allow us to compare achievement over time. With scale scores, we can compare achievement from one grade to the next because these scores are based on a continuous scale. Scale score were developed by the publishers of CAT in such a way that the national average scores increase from grade to grade.

Another scale exists which will allow us both to compare scores from one year to the nest and to compare the district with the nation. This is the standard score scale, which is based on the concept of the normal curve. We can use this scale since we know that our district's performance is similar to the national norm group and since scores of the national norm group fit the normal curve pattern. With standard scores, the average is always set at zero and a given percent of student scores will fall within specified ranges of deviation from the average, witha majority of students scoring close to the average.

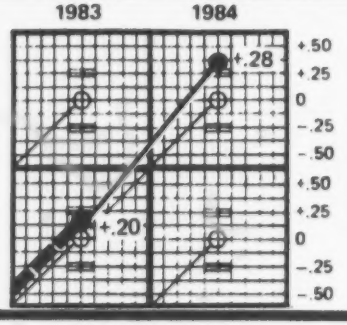
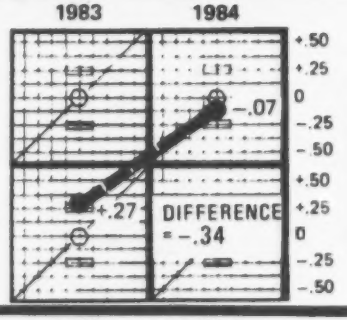
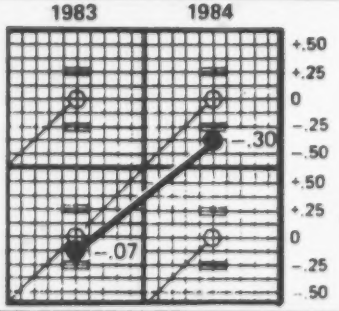
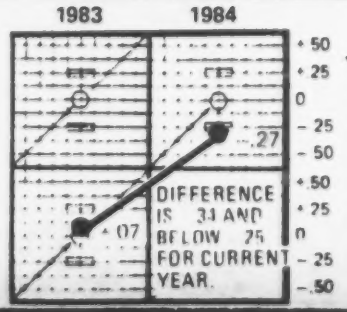
On the standard score scale, the ranges are marked by intervals of one. A standard score reflects the degree of deviation from the national average. Two-thirds of the national population scored within one standard deviation above and one standard deviation below the average. Another way of saying this is that two-thirds of the national population had a astandard score between plus or minus one. The boundaries set for our district are one-fourth or a .25 of a standard score above and below the natonal average. Scores falling within those boundaries will be considered within the average variation for our district compared with the nation. If a district average falls below the boundary, it will be considered below the expected performance for our district.

Besides allowing us to determine where a single score is in relation to the nation, the standard score and our boundaries let us compare the district average in a skill area from one grade and year to the next to see if a program remains within its own expected range of variation. Depending on both the current stanrdard score average and the grade level difference score, there are 4 possible sets of judgments that can be made (see decision rule chart).

In review, the assessment process has given us data for locating problem program areas. By applying district standards to the data, it is recommended that a needs identification and program improvement be conducted. The State Minimum Standards requires that needs be identified in the areas assessed, that priorities be set for meeting those needs and that policies and procedures be designed for making program improvements.

The assessment process allowed us to locate instructional areas which are not meeting district standards. The next step is to identify unmet program needs which one can infer are having a negative impact on student performance in these areas.

PROGRAM IMPROVEMENT DECISION RULES

DECISION RULE 1	AT OR ABOVE STANDARD BECAUSE	DISTRICT STANDARD SCORE FALLS BETWEEN A –.25 AND +.25 OR ABOVE +.25 WHEN COMPARED TO THE NATIONAL AVERAGE		PROGRAM IMPROVEMENT IS NOT REQUIRED. STAFF SHOULD BE AWARE OF "WHAT IS NEW IN THE LITERATURE".
DECISION RULE 2	BELOW STANDARD BECAUSE	THE DIFFERENCE BETWEEN THE CURRENT AND THE PREVIOUS INSTRUCTIONAL YEAR IS –.25 OR GREATER		PROGRAM IMPROVEMENT IS NOT REQUIRED. PERFORMANCE HAS DROPPED SIGNIFICANTLY. TEACHERS, PRINCIPALS, & SPECIALISTS SHOULD BE ALERTED FOR POTENTIAL PROBLEMS.
DECISION RULE 3	BELOW STANDARD BECAUSE	DISTRICT STANDARD SCORE AVERAGE FALLS AT OR BELOW –.25		PROGRAM IMPROVEMENT IS RECOMMENDED. PROBLEMS MUST BE IDENTIFIED AND ALTERNATIVE SOLUTIONS EXAMINED FOR POTENTIAL IMPLEMENTATION ACCORDING TO DISTRICT DEVELOPED PRIORITIES.
DECISION RULE 4	BELOW STANDARD BECAUSE	THE DIFFERENCE BETWEEN THE CURRENT AND THE PREVIOUS INSTRUCTIONAL YEAR IS –.25 OR GREATER AND THE CURRENT DISTRICT STANDARD SCORE FALLS BELOW –.25		PROGRAM IMPROVEMENT IS REQUIRED. PROBLEMS MUST BE IDENTIFIED, ALTERNATIVE SOLUTIONS EXAMINED, & ACTIONS TAKEN TO CORRECT PROBLEM AS SOON AS POSSIBLE.

District Use of Data
To Support School Improvement

Dr. Milton Snyder
Federal Way School District, Washington

THE FEDERAL WAY STORY

Federal Way has 15,000 students with 700 teachers and 750 support personnel. Federal Way School District is located in a large suburban area between Seattle and Tacoma and 15 minutes from Sea-Tac International Airport.

We have gone through a devastating strike in the 1970's, lost levies for seven successive years; saw test scores and student achievement decline because of lack of human and material resources; and the loss of community and staff faith in the District's ability to educate children.

Today, the District boasts 2/3's of its student test scores are above grade level on National tests, we are showing an enrollment increase for the first time in 10 years, since 1980 we have passed three two-year levies and a $30 million bond issue. Our bus fleet is being modernized with the purchase of 22 buses over the last few years and the surplusing of many older buses; the building and grounds look like we care once again; we have either PTA's or Booster Clubs in every school; and 2/3's of our 26 schools have been accredited with a goal of 100% accreditation by the end of next year. Pride and dedication have replace apathy.

HOW DID WE START?

Goal setting was a must. In 1980, the District gathered input from community members on their perceptions of the schools, staff and curriculum. Goals were set to address the most critical preceived needs. Unaccomplished goals were carried forward as new goals were set.

I am an advocate of community participation in the schools whenever possible. I have a commitment to ensure parent and ethnic representation at all levels. Our first People-to-People meeting was held in 1980. For two years a series of meetings were held on specific topics with members of the community invited to attend. While this was well received, we still did not draw the numbers I felt were needed.

Through Board review, community input, staff and cabinet work, we were able to set academic program goals as well as goals in the areas of in-service for certificated and classified staff, building and grounds improvement, financial accountability, etc.

I developed my own priorities with cabinet. Each division--Learning and Support--developed their goals based upon community, Board and my goals. Learning goals were developed with the assistance of the principals. They were then filtered down to the key element--the school--where individual building plans are developed. After all, the place where the goal must go into action is the classroom, and the results are with the children.

LET'S LOOK AT THE PARTS THAT MAKE UP THE PLAN

The community input is not developed in a haphazard manner but through a planned, systematic approach. You cannot decide on a Friday to put Community Forum on the following week.

Phase I includes a survey distributed in the beginning of October. Until this year, they were distributed to all staff, key community leaders, PTA and Booster Club officers and identified individuals. This has changed this year as we have developed a survey which will be mailed to 30,000 postal patrons within our school boundaries in addition to the groups and individuals previously mentioned.

The one negative point in previous years is that we dealt with positive groups---i.e. parents, community activists with kids in the schools and for the most part, a positive staff. We will alleviate this negative point this year through the Survey developed by our Communications Person.

In Federal Way we have five junior high schools which serve as the sites for the Community Forums. Each of the 26 schools guarantee 10 people who will attend one meeting in their service area. The forums generally last approximately 3 hours each and include a brief address by a Board member, an overview of the District and identification and discussion of 10 critical issues (obtained through the results of the first survey), time for small group discussions, completion of a different survey, and then a general question and answer period.

These results are then made available to the Board who develops the District goals while participating in a one-day workstudy. By this point, they have received the community forum results, information from the Superintendent, Board and Cabinet, and from the perceptions of needs and desires they bring with them that day.

Once they have developed their goals, I begin to work on mine--based on the District goals.

The next step is the development of administrative goals by each of the divisions. These are the goals that give the foundation and state who will do what by when. Their plan of action is then developed--just as School Learning Plans which support all other levels and give action and direction. These goals must have a plan of action and include who will carry out the goal, by when, how and what type of evaluation will be used to see if the goal has been met. The key ingredient is the individual Learning Plan in each of the District's 26 schools.

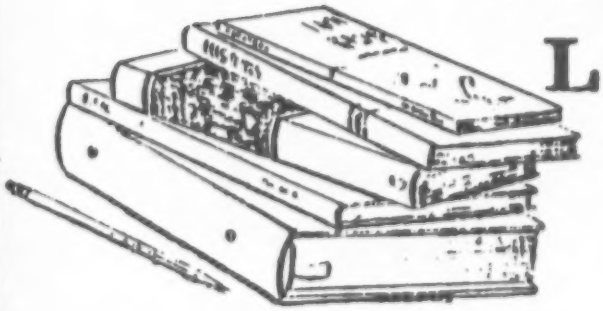
A Learning Plan is nothing more than a partnership between the principal, professional and certificated staff and the community.

The Learning Plan committee is composed of principals, representatives of every elementary grade level, broad subject areas at the secondary level and community members. All Learning Plan goals support the need for achievement and improvement and also support the Board's goals.

Specifically, the goal is stated in measurable terms--once again who is responsible for achieving the goal, how will the goal be accomplished, when and how it will be evaluated.

Federal Way School District

Mirror Lake Elementary School



SCHOOL LEARNING PLAN 1984-85

Elementary

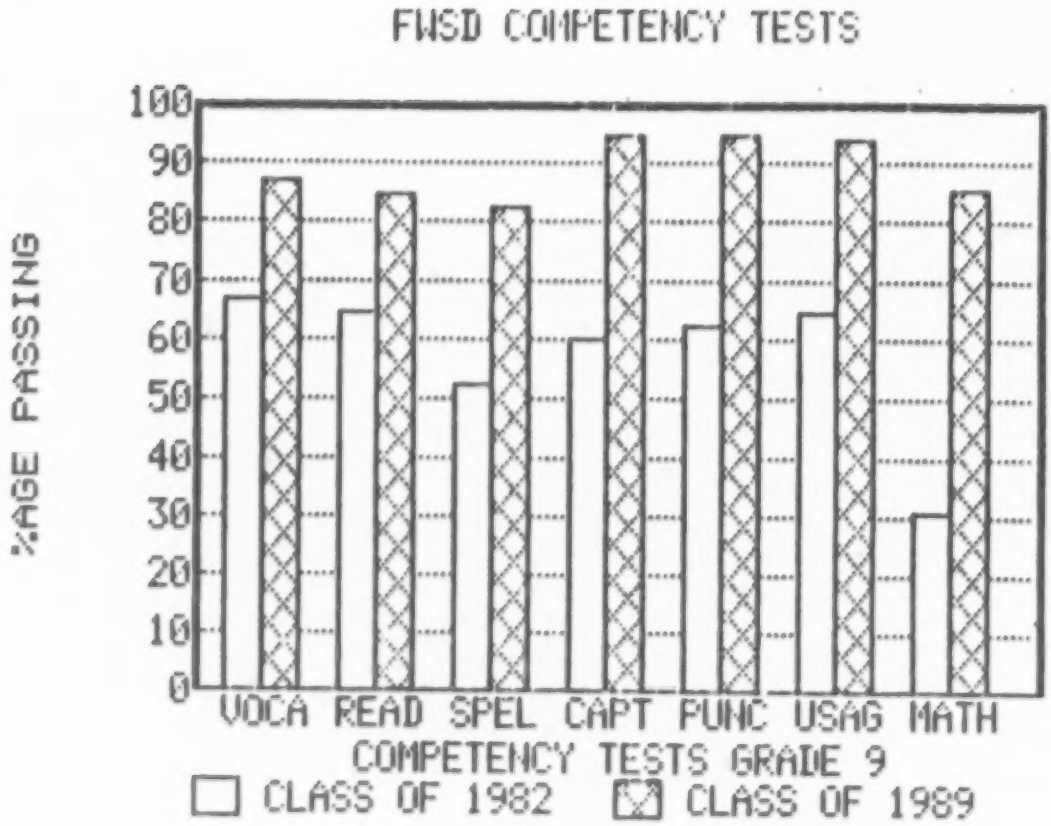
RESULTS

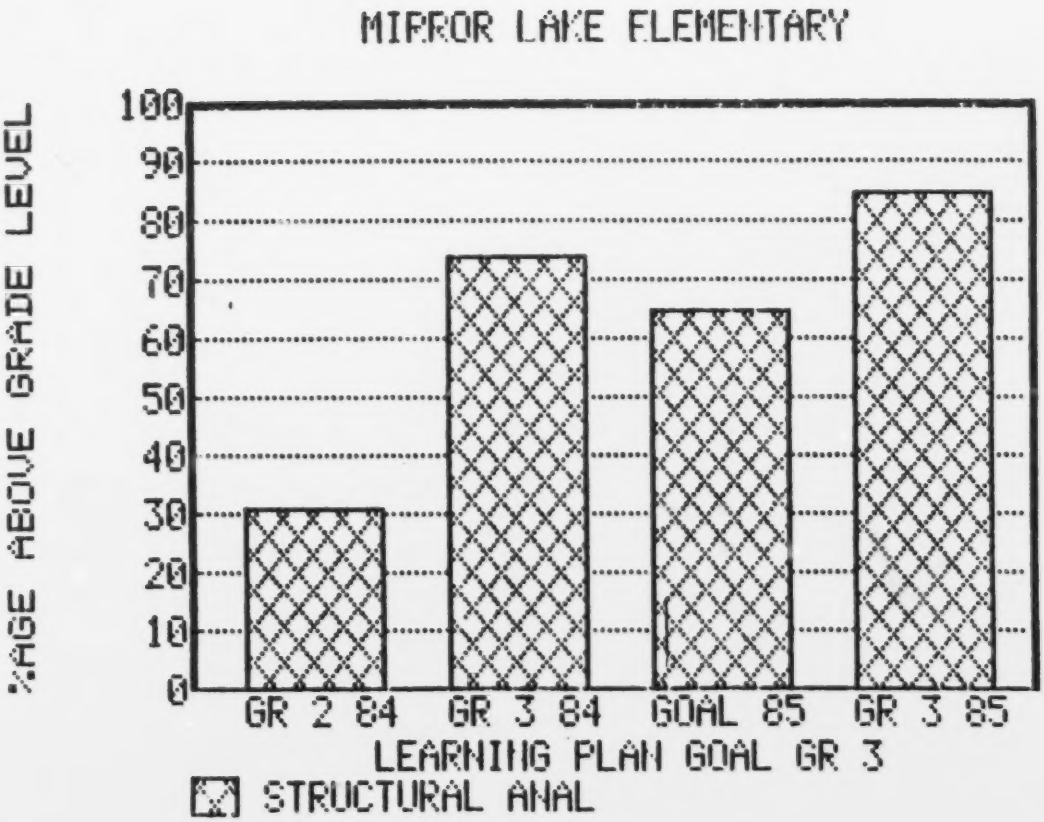
80%

ABOVE GRADE LEVEL IN
ALL BASIC SKILLS GR. 1-8

80%

PASS ALL COMPETENCY
TESTS IN GRADE 9


FWSD COMPETENCY TESTS
%AGE PASSING
100
90
80
70
60
50
40
30
20
10
0
VOCA READ SPEL CAPT PUNC USAG MATH
COMPETENCY TESTS GRADE 9
CLASS OF 1982
CLASS OF 1989


MIRROR LAKE ELEMENTARY
%AGE ABOVE GRADE LEVEL
100
90
80
70
60
50
40
30
20
10
0
GR 2 84
GR 3 84
GOAL 85
GR 3 85
LEARNING PLAN GOAL GR 3
STRUCTURAL ANAL

MIRROR LAKE
LEARNING PLAN 1984

* 9 TEST GOALS
* HIGHER LEVEL THINKING
* COMMUNICATIONS
* WRITING SKILLS
* MULTICULTURAL
* STUDENT MOTIVATION
* STU. ACCOUNTABILITY
* PARENT INVOLVEMENT
* SCHOOL ATMOSPHERE
* LIFE-LONG READING
* LIBRARY AS RESOURCE

A WINNER

LOOKS AT THE BIG PROBLEM, TAKES IT APART, AND SOLVES THE SMALL PARTS!

THE LOSER

TAKES A LOT OF THE LITTLE PROBLEMS & ROLLS THEM UP UNTIL THEY ARE UNSOLVEABLE!

STAFF DEVELOPMENT

STAFF NEEDS PRIORITIZED

ACTIVITIES WRITTEN

SOURCE OF FUNDS FOUND

EVALUATION OF PROGRAM

THE ACTION PLAN

ACTIVITIES

WHAT IS PLANNED?

RESPONSIBILITY

WHO IS RESPONSIBLE?

EVALUATION

COMPLETION DATE

WRITE OBJECTIVES

* SUPPORTING DISTRICT GOALS

* REFLECTING SCHOOL NEEDS

* FOCUSING ON LEARNING

ANALYZE THE TEST DATA

* IDENTIFY STRENGTHS
* IDENTIFY WEAKNESSES

ANALYZE WEAKNESSES

* PAST PERFORMANCE
* LONGITUDINALLY
* COMPARISONS
* ITEM ANALYSIS
* SLO MATCH
* CURRICULUM MATCH
* SEQUENCE MATCH

DETERMINE NEEDS

* TEST DATA
* IMPUT FROM:
  * STAFF
  * STUDENTS
  * PTA (PARENTS)
* ACCREDITATION PRIORITIES
* OBJECTIVES NOT COMPLETED
* PERSONAL GOALS
* DISTRICT GOALS

REVIEW
DISTRICT GOALS

DEVELOPED BY:

* COMMUNITY
* SUPERINTENDENT
* SCHOOL BOARD

BUILDING GOALS MUST SUPPORT DISTRICT GOALS!

LEARNING PLAN COMMITTEE

A PARTNERSHIP BETWEEN PRINCIPAL AND STAFF:

COMPOSITION

* PRINCIPAL
* BASIC SKILL SPEC
* OTHER SPECIALIST
* GRADE LEVEL REP
* PARENTS

SCHOOL LEARNING PLAN

* THE COMMITTEE
* REVIEW GOALS
* ANALYZE DATA
* DETERMINE NEEDS
* WRITE OBJECTIVES
* THE ACTION PLAN
* STAFF PLAN
* GAIN APPROVAL

+ + + + +

GOALS

DISTRICT GOALS

SUPT. GOALS

DIV. HEAD GOALS

PRINCIPAL GOALS

LEARNING PLANS

TCHR. LESSON PLAN

MODEL

DEVELOP GOALS & OBJECTIVES

DEVELOP AN EVAL-UATION METHOD

PLAN STRATEGY

IMPLEMENT - DO IT!

EVALUATE

NO!

"I WANT YOU TO FEEL GOOD ABOUT YOURSELF, BUT I ALSO WANT YOU TO LEARN."

"WHEN YOU LEARN, YOU FEEL BETTER ABOUT YOURSELF."

MUST HAVE A PLAN
BASED ON GOALS!

OFTEN THESE GOALS
INVOLVE CHANGE

IT IS INHUMANE TO
LET THIS CHANGE
OR TEACHING
PROCESS GO TO
CHANCE!

"WHATEVER
IS IMPORTANT
IN A COUNTRY
IS HONORED
THERE."

PLATO

"IT'S GOT A NICE
LOW READING
LEVEL."

RESULT!

LESS VOCABULARLY
LESS THINKING
LESS WRITING SKILL

"BUT YOU FEEL
BETTER ABOUT
YOURSELF."

WHY IS THIS IMPORTANT?

5 HRS PER DAY

X TIMES X

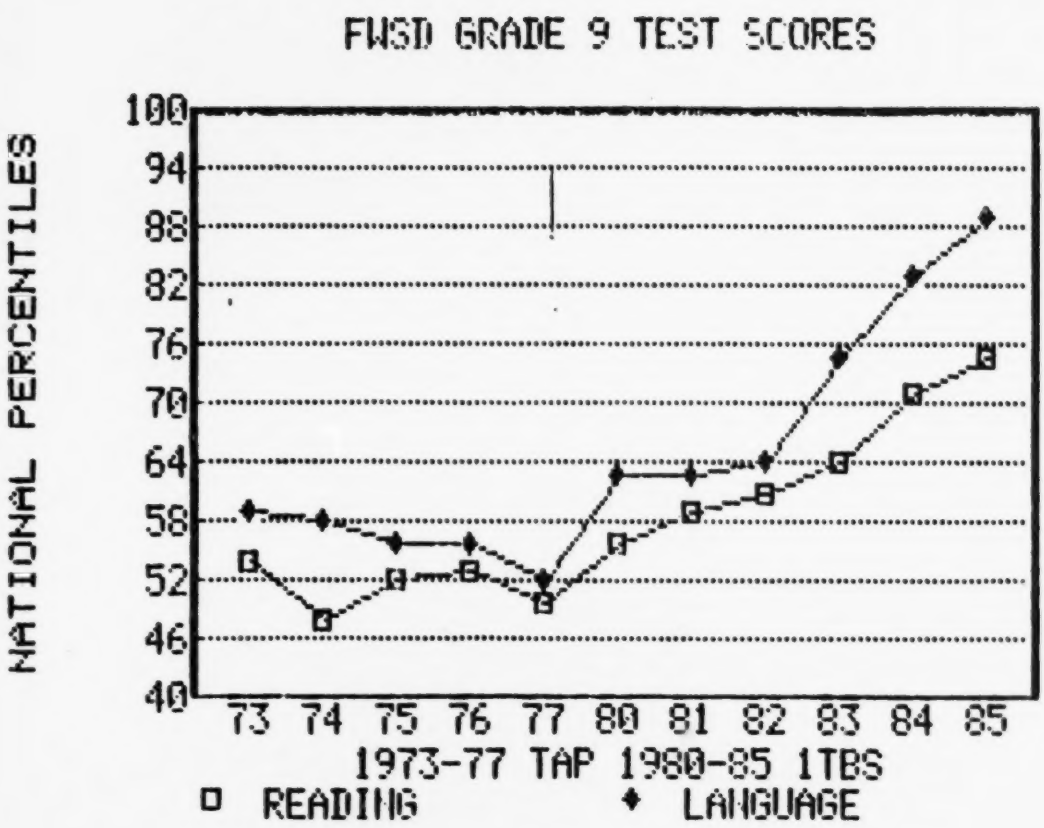
12 YEARS

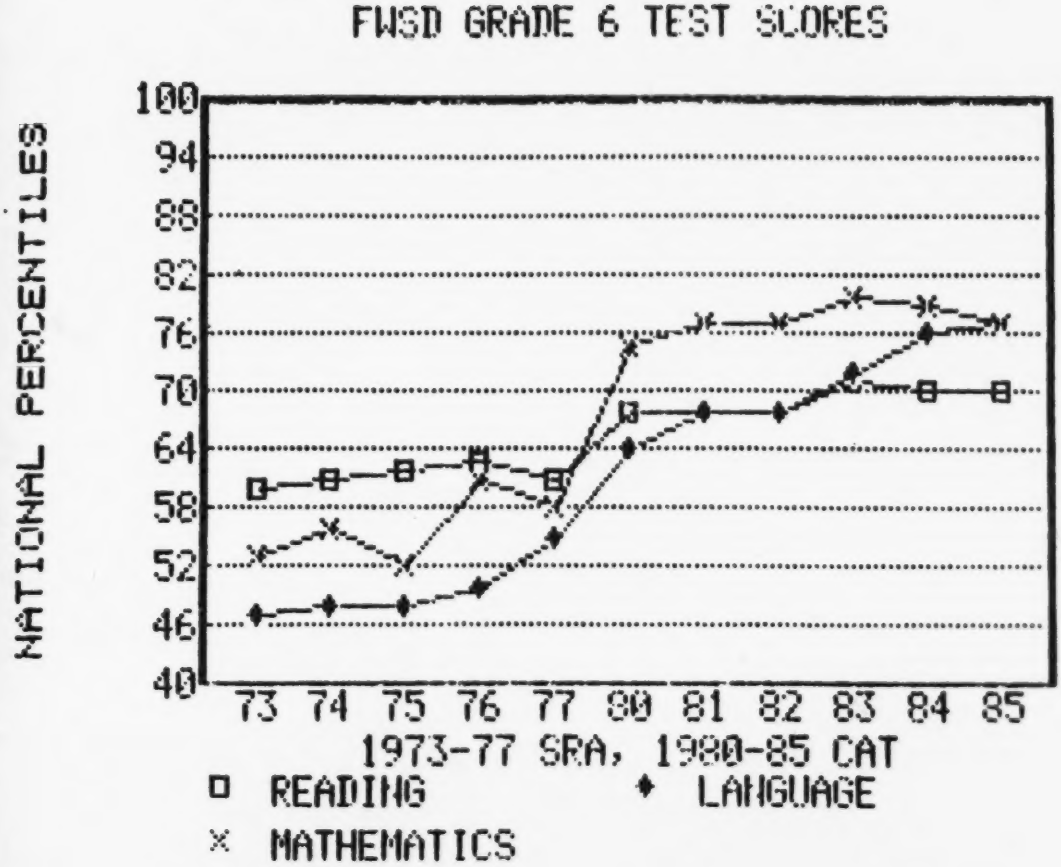
= EQUALS =

1 & 1/2 YEARS

OF FORMAL SCHOOL

THE QUALITY OF
A SCHOOL CAN
ONLY BE
JUDGED
BY THE DEGREE
TO WHICH IT
ACCOMPLISHES
IT'S GOALS.


FWSD GRADE 9 TEST SCORES
NATIONAL PERCENTILES
100
94
88
82
76
70
64
58
52
46
40
73 74 75 76 77 80 81 82 83 84 85
1973-77 TAP 1980-85 ITBS
READING
LANGUAGE


FWSD GRADE 6 TEST SCORES
NATIONAL PERCENTILES
100
94
88
82
76
70
64
58
52
46
40
73 74 75 76 77 80 81 82 83 84 85
1973-77 SRA, 1980-85 CAT
READING
LANGUAGE
MATHEMATICS

REMEMBER THE

GOOD OLD DAYS

WHEN TEACHERS

WENT HOME HAPPY

AND THE KIDS WENT

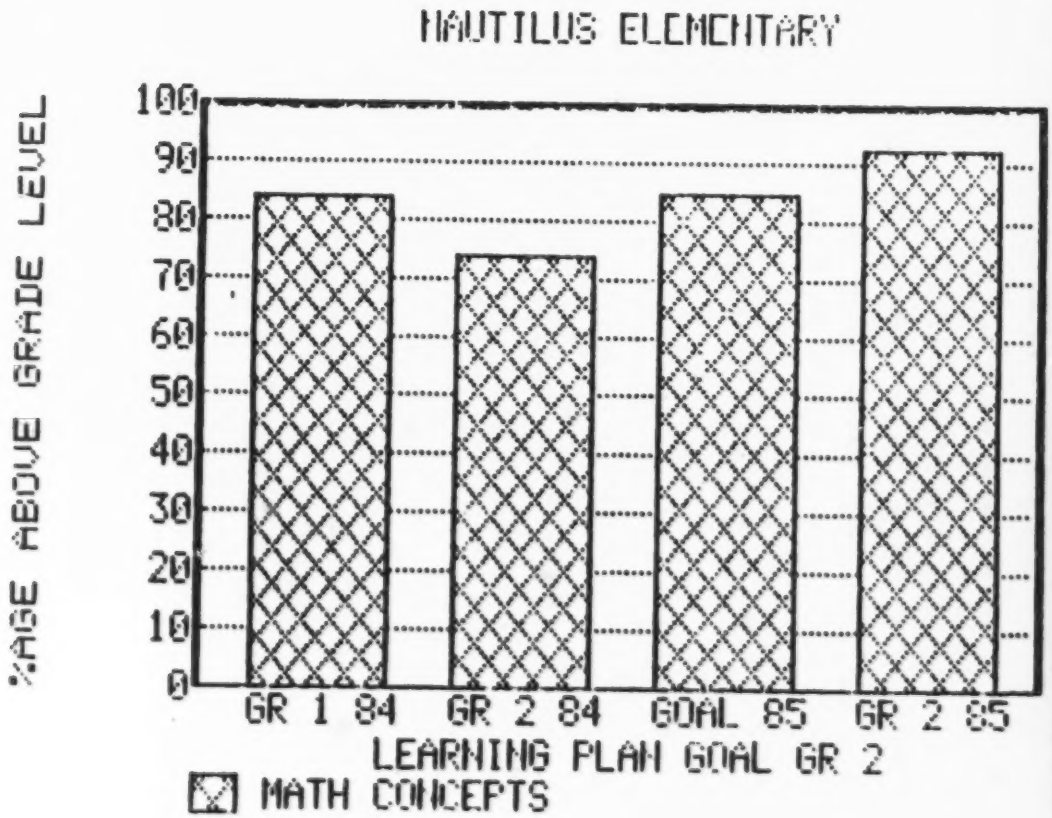
HOME TIRED!

NWASC ACCREDITATION

1980-87

3 HIGH SCHOOLS
1 ALTERNATIVE SCHL
5 JR HIGH SCHOOLS
16 ELEM. SCHOOLS

THE LARGEST SYSTEM IN THE NWASC TO BE FULLY ACCREDITED


NAUTILUS ELEMENTARY
%AGE ABOVE GRADE LEVEL
100
90
80
70
60
50
40
30
20
10
0
GR 1 84
GR 2 84
GOAL 85
GR 2 85
LEARNING PLAN GOAL GR 2
MATH CONCEPTS

THE ACTION PLAN

ACTIVITIES
+WHAT IS PLANNED?

RESPONSIBILITY
+WHO DOES WHAT?

EVALUATION
+DID IT WORK?

COMPLETION DATE
+WHEN IS IT DONE?

ANALYZE TEST DATA

IDENTIFY STRENGTH
ANALYZE WEAKNESS

PAST PERFORMANCE
LONGITUDINALLY
COMPARISONS
ITEM ANALYSIS
SLO MATCH
CURRICULUM MATCH
SEQUENCE MATCH

The Role of Evaluation and Assessment Data in Managing a Large District

Matthew Prophet
Portland Public Schools

Introduction

Modern computerized data and information systems are exciting and essential new tools for the effective pursuit of excellence and equity in today's schools and school districts. The greater the challenges we face as educators, the more pressing is the need for data-based decision making to help us change for the better and be accountable to our patrons and the public.

For at least two score years enlightened school system administrators and teachers have been laboring to create, maintain, and use comprehensive data and information systems for the improvement of schooling at both the instructional and management levels. The overall goal of these efforts has been to apply the science of data-based decision making, born in the turmoil of the Second World War, to our basic mission of supporting the magic moment of learning by individual students. These effrots have been driven by the hope that by collecting, analyzing, reporting, and using accurate and appropriate information about students, as well as about classroom, school, and district support systems, we could use the scarce resources entrusted to us to create effective, equitable and efficient self-renewing school-learning communities. This hope is happily at long last beginning to be realized.

Emerging Data and Information Systems in Portland

In the Portland schools and district offices we are exploring, developing, and applying a wide variety of new data and information systems for district and school improvement and accountability. The framework for our district's efforts to use data-based systems to improve education is our Comprehensive Instructional Technology Plan. In April, 1983 the Board of Education approved and adopted the district's first such plan. Since then it has been annually evaluated, refined, and extended. Through this plan our policymakers, professionals and patrons shape our efforts to develop and utilize modern computerized systems to support improvement of schooling and school management through data and information. Coordination responsibility for this plan rests with our Department of Information Services. This department has broad leadership and support responsibilities for the collection, validation, and maintenance of district data and for the development, implementation, and refinement of computerized information systems.

The Comprehensive Instructional Technology Plan lays out the following 1985-86 goals for improving our district's use of data and information systems to support school improvement and accountability:

- To continue efforts for distrubuting data processing and information services to the schools

  During the 1984-85 school year the Data Processing Department implemented on-line processing workstations in 13 additional schools so that more than half of the district's students were served by on-line computer processing. During the 1985-86 school year an additional 25

schools are being provided with on-line services. These workstations put at the fingertips of building staff student data ranging from identification and demographic data to performance data such as grades, test scores, attendance, and courses.

- To continue to provide training and strong staff support to schools and offices

  During 1984-85 seven data processing specialists and three curriculum specialists were available for support activities. In 1985-86 the data processing specialists have been organized into a user services unit to provide even more coordinated support. The Curriculum and Educational Media departments are also refining and expanding support in the areas of teacher training, software evaluation, and technology- curriculum development. This represents a significant commitment to our schools and offices in assisting them in the development of their skills to utilize computer technology to its fullest.

- To explore the capability of the microcomputer as a tool to assist the individual teacher in classroom management

  One elementary school has been selected for a pilot project in which a microcomputer and printer, along with appropriate software, will be provided to every teacher. The need to reduce the workload of teachers in the face of increasing requirements on their time and teaching load requires help from this technology.

- To continue to explore and develop data communications possibilities and alternatives

  In 1985-86 we plan to complete much of the conversion to more efficient telecommunications systems for many of the schools as well as for the administrative and support services in the Education Service Center and the Child Development Center.

The last three goals of the Comprehensive Instructional Technology Plan are:

- To explore the possibility of upgrading the district's computer printing capabilities

- To continue to improve the district's computer graphics and mapping capabilities and

- To begin the conversion of the district's Central Processing Unit to an even more powerful and flexible resource.

The Comprehensive Instructional Technology Plan and its goals guide our electronic technology-based efforts in the areas of policy and management; instruction and instructional support; research, evaluation, and testing; and computerized educational support systems.

Policy and Management

Within the Information Services Department is the Office of Management Information Services which is the distribution arm of information from the department, and which is responsible for providing me and my staff with management information and analyses necessary for planning and monitoring district operations and for developing policy recommendations. That office also works with the Budget Office to ensure district-wide input and involvement in the planning/budgeting cycle. Moreover, schools and programs receive valuable management information through routine reports and responses to their special requests.

Instruction and Instructional Support

Our Office of Instructional Technology was created to spearhead our district's efforts to use modern technology to improve education by helping our students learn more effectively and efficiently. That office is piloting exploratory efforts in such areas as computer-controlled video disc applications, writing analyzers, computer art, and the use of computers in science and social studies.

One major innovative school-based information systems effort we are exploring is the Computer-Managed Instruction (CMI) project. In this system, developed by the Curriculum and Information Services departments, when student reading progress assessments are desired by teachers, tests are selected from the curriculum guide and administered utilizing a specially designed scan sheet for marking the answers. Answer sheets are taken to the office where they are processed and reports are produced. From these reports the instructor has valuable information quickly in hand concerning the progress of a student towards his or here learning objectives. Information from these reports is useful in determining whether reteaching is required, regrouping students is necessary, or whether to continue the instructional process as planned.

Research, Evaluation, and Testing

Another department that plays a central role in fostering data-based decision making at the district, program, classroom, and individual student levels is our Department of Research and Evaluation. The chief mission of this office is to add to the quantity, objectivity, validity, reliability, and accessiblity of the data we use to make decisions to help students advance and programs improve. They do this primarily by providing testing, evaluation, and research reports and technical support to help assess and improve student instruction and achievement, as well as to evaluate and enhance educational support and management services. These reports and services are provided to teachers, students, parents, support staff, building and program managers, central administrators, policymakers, and citizens. They are designed to facilitate targeting instruction on student needs and to help improve programs, policies, and resource allocations.

In addition to operating successful programs of testing and evaluation our Research and Evaluation Department leads an ongoing program of collaborative research and development aimed at continuously improving our capacity to meet student achievement data and information needs. Some of the new helps to decision making based on data about student performance that are debuting this year are:

- New mathematics and language arts achievement testing systems completely revised to reflect improvements in the curriculum, including the greater emphasis on higher order skills such as problem solving.

- Development and piloting of new systemwide testing systems in the critically important areas of science and direct writing.

- Streamlining and graphically enhancing the test results reporting system in order to provide better support for appropriate interpretation and use of research, evaluation, and testing results.

- Offering districtwide a school-based microprocessor test reporting system. Over the past two years, a group of seven principals, along with the Data Processing Department and the Research and Evaluation Department, have worked to develop this computer system for local building controlled reporting and analysis of test data. The pilot system began with four goals in mind. We were interested in finding a program that would run on building microcomputers that would accomplish the following:

  1. Provide a complete individual student test history to building staff immediately on request.

  2. Produce test reports by instructional group.

  3. Provide analyses of longitudinal student group data when and as the building needed them, and

  4. Improve the turnaround time of test reports.

  We now have a program which gives local buildings the ability to meet these four goals and we have offered it to all schools in the district.

- Initiating a pilot of a school-based computer adaptive testing system which allows building personnel to continuously monitor the progress of students as they advance through the basic skills curriculum. This system involves putting a sufficient bank of field-tested items inside a computer along with the requisite software to build a unique, individualized test for each student at the time when building staff feel it is needed.

  The advantages of this system include:

  - Increased measurement accuracy

  - Increased testing flexibility

- Improved use of testing as an integral part of the instructional process
- Enhanced test security
- Decreased testing time
- Increased ability to measure high-level educational goals such as problem solving
- Immediate feedback of results

Our Research and Evaluation Department has mounted a pilot CAT program this fall in cooperation with the Information Services Department, directors of instruction, and principals. the purpose of this pilot is to gain the information necessary to design a cost-effective CAT system that will serve the future testing needs of all our students and our schools.

Computerized Educational Support System

Our Data Processing Systems Development staff is continuously developing, maintaining, and enhancing a wide variety of computerized educational support systems including: Payroll, Personnel, Maintenance, Transportation, Educational Media, Financial Planning and Accounting, Facilities, Food Services, and Student Information.

These systems utilize the latest technology such as on-line transaction processing, data base management, optical scanning, interactive terminals, and networked microcomputers. These sophisticated data and information systems are all ultimately dedicated to helping us assist students to learn.

Benefits of Such Data and Information Systems

The uses to which such emergent innovative data and information systems can be and are being put in Portland and elsewhere about this state and this nation are great and greatly exciting. They include:

- Targeting instruction on the needs, abilities, readiness, and characteristics of individual learners.
- Grouping and placing students so that their learning needs may be met most effectively and efficiently.
- Better and easier classroom, building, and district management resulting in better decisions at lower cost, freeing time, and other resources to be spent on instruction and direct learning support and leadership.
- Prompt, accurate, and thorough evaluations of program cost effectiveness.
- Timely and thorough data to support policy formulation and monitoring.

Tested theories of effective education now reveal what we must do to imporve schools and to help every child learn as much as he or she can as effectively and efficiently as possible. They indicate that our educational leadership must support the development and learning environments in which the following sorts of things happen for each of our students:

- His or her current, most pressing learning needs within a well planned curriculum must be identified.
- The student must be helped to set clear, relevant, attainable learning objectives to meet those needs.
- He or she must be expected to succeed in attaining the learning objectives and must want to learn them.
- The student must receive individualized instruction directly related to the learning objectives designed to meet his or her current learning needs.
- The learner must use the time allocated for instruction to work intently and seriously on the task of learning.
- The student must know when he or she has succeeded and when not, and must experience a reinforcing sense of accomplishment and achievement as a result of knowledge of success.
- The learner must receive and return a sense of caring, personal concern, interest, respect, and commitment which provides the psychological support necessary to want to learn and to work to learn, and finally
- The student must receive and accept parental and community support and encouragement for success in learning.

The main barrier to our putting such models of effective instruction and education into practice up until now has been the lack of accurate data and information about:

- Each student's individual learning needs.
- What learning activities and experiences are matched to diagnosed student needs and to established learning objectives and how to help the student engage in such tailored instruction in a timely fashion.
- When the student has mastered the objectives and is ready to move on.
- The degree of overall success of staff and programs in promoting student learning, and
- What is and is not working to help students learn.

We are now, however, at long last beginning to evolve the comprehensive electronic data and information systems needed in order to create the more effective, equitable, and efficient education systems required for real and meaningful educational reform and even reinvention of schooling.

Conclusion

John Holt has chided the current educational reform movement for taking a horese and buggy system, repainting the buggy, paying the driver more, keeping the passengers in it longer, and foolishly expecting it to go faster and better.

By placing modern data and information systems technology in the service of school improvement and accountability, however, we are unhitching the good but tired old horse, putting a powerful engine in the educational buggy, turning the driver loose, and riding off swiftly toward meeting our goal of helping every child become everything he or she can and wants to be. I, for one, am immensely pleased and excited to be along for the ride on this historic leg of the educational journey.